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Systematic Database of Musca Names (Diptera)

A catalog of names associated with the genus-group name *Musca* Linnaeus, with information on their classification, distribution, and documentation

by

F. CHRISTIAN THOMPSON & ADRIAN C. PONT



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#### Authors' Addresses

F. Christian Thompson Systematic Entomology Laboratory, USDA NHB-168 Smithsonian Institution Washington, D. C. 20560 U.S.A.

Adrian C. Pont
Hope Entomological Collections, University Museum
Parks Road
Oxford OX1 3PW
England

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#### Introduction

There is nothing so disastrous in Science as the arrogant dogmatism which despises the Past and admires nothing but the Present.

Hoefer

Flies are important to man. They carry diseases, suck the blood of man and his animals, and destroy crops and food, but some are useful as pollinators, predators and parasites of man's enemies. In order to deal effectively with these pests and beneficials, man must have a name for each kind of fly. A kind of fly is called a species, and species are concepts. Names are critical, for without them communication about concepts would be impossible. To be useful, names must be unique: one and only one name for each concept. While names for species have existed since the beginning of recorded time, a formalized system for these names is a recent innovation. The gradual shift to this nomenclatural system has left a confusing array of names, there being the same name for different species and different names for the same species. As a contribution to eliminating this confusion, we have developed a systematic database of the names for flies.

Information does not become obsolete over time. The quality and relative quantity of data may be diminished, but useful information can still be found in old literature. Two examples will suffice to illustrate this point. Despite its antiquity, De Geer's Mémoires ... (1773) still contains much useful information about flies and their biology. Vockeroth (1969: 74-76, 139) recognized 4 species groups of the genus Dasysyrphus based on characters of the male genitalia and abdominal pattern. In a postscript, Vockeroth noted that his species groups agreed moderately well with the subgenera proposed by Dušek and Láska (1967). In addition to adult characters, Dušek and Láska used larval ones, which prompted Vockeroth to conclude "Further study, especially of many currently unknown larvae, may however support the recognition of these subgenera." At that time, Dušek and Láska knew larval examples of 3 of Vockeroth's 4 species groups. Unfortunately due to previous authors' disregard for the literature and the principle of priority, Dušek and Láska did not know that the larva of the 4th species group had also been described by De Geer (Musca pinastri). A quick inspection of De Geer's figures reveals that each species group of Vockeroth (or subgenera of Dušek and Láska) is easily recognized in the larval stage by the shape and number of fleshy protuberances.

A second example concerns screwworms. Some screwworms (*Cochliomyia*) are endemic to the New World and others (*Chrysomya*) to the Old World. All screwworms cause great injury to livestock and humans.

Hence, the introduction of Old World screwworms into the New World and vice versa is a phenomenon of great interest to agriculture. The introduction of Old World screwworms into the New World is generally thought to be a modern phenomenon (Gagné, 1981, Baumgartner & Greenberg, 1984), but it may not be so. De Geer described an Old World screwworm (Musca erythrocephala) from Surinam more than 200 years ago, but this fact was forgotten by subsequent workers (Thompson, 1973). These workers assumed that the specimens of Chrysomya megacephala found in De Geer's collection under the name Musca erythrocephala, while agreeing with De Geer's description, could not have been authentic types due to the then known distribution of the species. It is now obvious that De Geer did, in fact, describe an earlier introduction of Old World screwworms into the New World.

To access the older literature, one needs to know that it exists and one must have an index to it. The first step in preparing such an index is determining the meaning of the names under which the information was recorded (that is, developing a list of synonyms). Our database provides this first step for some 2,000 names of flies.

# A Systematic History of Musca

It is an arduous task to give novelty to what is ancient, authority to what is new, interest to what is obsolete, light to what is obscure, charm to what is loathsome, and credit to what is dubious.

Pliny: Natural History

The word "fly", like the French "mouche" and German "Fliege", has always been a generalized, typological term, and so it was originally with the words for "fly" in Classical Greek ("μυτα") and Latin ("musca") which we have now come to accept in our scientific vocabulary as terms with a precise evolutionary meaning. The purpose of this chapter is to trace the metamorphosis and refinement of the concept "musca," from its vernacular origin down to its contemporary and very much more restricted meaning.

### Earliest times to Linnaeus (1758)<sup>1</sup>

Flies, and particularly domestic flies, have been man's constant companions during the entire course of human evolution, and beyond.

<sup>1</sup> For fuller details of the entomology of this period, see Bodenheimer (1928, 1929), Harpaz (1973), Morge (1973), Beier (1973) and Tuxen (1973); and for a detailed consideration of the identity of the insects discussed by classical Greek and Latin authors, see Beavis (1988).

The ancient civilizations of the Mediterranean, our intellectual and cultural forbears, had little precise knowledge of flies. Without the economic resources, social motivation, intense intellectual curiosity, and optical equipment that subsequently became available in 19th and 20th century Europe, they noted only those flies that impinged directly upon their lives, usually anthropomorphising them or endowing them with a numinous aura. For example, the Bible (2 Kings, chapter 1) reports on the worship of Baal-zebub at the Philistine town of Ekron (in modern Israel). Baal-zebub means "lord of the flies", and by punning with Baal-zebul, "lord of the dung", the Jews not only included a sneer at polytheism and the worship of idols but implicitly recognized the connection between flies and dung. In the heat of the Middle East, Baal-zebub was worshipped because he gave protection against flies, and even drove them away. The ancient Greeks gave Zeus and certain other gods the cognomina μυιωδης (myiodes: god of flies), απομυιος (apomyios: expeller of flies) and μυιαγρος (myiagros: hunter of flies) because these divinities were able to clear their temples of these insects.

During the period of Classical antiquity, from circa 1000 BC until circa 100 AD, the Greek "μυια" and Latin "musca" were used to cover synanthropic flies corresponding to the current families Muscidae and Calliphoridae (Beavis, 1988). These were recognized as distinct from smaller gnats and midges, and usually also from mosquitoes, horse flies, and cattle flies (bots, warbles) for which other terms were available: οιστρος, μυωψ, χωνοψ, εμπις, tabanus, asilus, culex, empis. The greatest zoologist of the period was Aristotle (BC 384-322), whose work was not surpassed for 2000 years. He classified insects firstly according to their wings and secondly according to their mouth-parts. He recognized a group of small insects with two wings, and also reported that the common house fly (Musca domestica) developed in heaped manure. His accounts of μυια (e.g. in The History of Animals IV, V) and those of other authors contain a curious mixture of sound factual observation and pure superstition and hearsay. For example, different stages of the life-history were known but they were not integrated into a life cycle. Aristotle mentions flies that extrude live maggots, yet he also refers to the spontaneous generation of maggots in dung and other putrefying matter, despite the fact that, at a far earlier period, Homer's epic poem Iliad referred to maggots being produced by flies in the corpses of men slain in battle. The feeding behaviour of μυια was known: Aristotle described them as having a strong "tongue" (γεντπον) with which they could draw blood; he may have had the stable fly (Stomoxys calcitrans) in mind at this point, or even certain Tabanidae. Elsewhere he classifies uvia among those insects that feed primarily upon liquids and juices.

In Roman times, the most significant figure was Pliny the Elder (AD 23-79) whose *Historia Naturalis* (AD 77) was founded on Aristotle. This was an encyclopaedic condensation of all that was known at the time, with few original observations. Pliny took up Aristotle's distinction between flies with a fixed biting proboscis and flies with a soft sucking proboscis: "[muscae] reliquorum quibusdam aculeus ... quibusdam muscis, omnibus autem his in ore et pro lingua" ["some of the rest have a sting ... and some flies, but with all of these it is in the mouth and serves as a tongue": interpreted as Stomoxys calcitrans]; and "sunt hi aculei quibusdam hebetes, neque ad punctum sed ad suctum, ut muscarum generi, in quo lingua evidens fistula est" ["with some these stings are blunt, and do not serve for pricking but for suction for instance with a sort of fly, in which the tongue is evidently a tube": Musca domestica].

The Medieval period, up to the close of the 15th century, was one of intellectual regression in scientific knowledge. The temporal and spiritual might of the Roman Catholic church was based upon an authority, tradition, and dogma in which empirical science had no place. Progress was not possible, nor was it desired. What might have been done could not in any case be disseminated, since writing was a monopoly of the monasteries. The dark cloud of ignorance and superstition was gradually dispersed by two events: the invention of printing and the fall of Constantinople, the repository of Classical learning for over 1100 years.

From this immensely long period of stagnation, a few works and authors can be highlighted to illustrate how the concept of "musca" was handled. Latin was the language of learning, and so "musca" was used for flies in a vernacular rather than a technical sense. Indeed, this continued right down to the time of Linnaeus, with most authors using "musca" as we now use "fly," to include flies, scorpionflies, dragonflies, caddisflies, stoneflies, mayflies, etc.

The *Physiologus*, originating in the 1st century AD, was the most popular zoological book of medieval times but is too overlaid with religious symbolism to be factually reliable: "musca," the fly, is a symbol of the devil and of suffering. Book 12 of *Origines sive Etymologiae* by Isidorus of Seville (560-636) discusses "musca" (and also "culex," "oestrus," "bibio"), and continues the fiction of the belief in spontaneous generation of maggots in meat. Isidorus mentions biting flies but not house flies. *De Universo* by Rhabanus Maurus (776-856) uses "muscae" to include flies, gad flies, and probably *Hippobosca*. *Liber de Natura Rerum* by Thomas Cantipratanus (1201-1263/93) also mentions "musca." Albertus Magnus (1193-1289), in the last book of his *De Animalibus*, discusses "musca" and asserts that the

fly has two wings and eight legs. It is thought that both he and Thomas Cantipratanus must have had house flies in mind. Petrus Candidus Decembrus (1399-1477) produced a *Codex* of animals that is one of the great exemplars of medieval art. He dealt with a "*Musca proterva*," which is also *Musca domestica*, and with a "*Musca cypri*," which is a fabulous creature addicted, like the salamander, to living in fire ("in medio ignium impune volant" — they fly with impunity in the middle of fire).

One bizarre aspect of medieval man's relationship with insects was in the field of pest control. Insects were actually tried before secular and ecclesiastical courts, prosecuted, and sentenced to banishment. In some cases, they were even physically arraigned before the courts and then executed.

Amidst this morasse of scholastic compilation, superstition, and hearsay, the liberating influence first of the Renaissance and then of the Reformation stimulated individuals to look at insects afresh, to make original observations without preconceived notions, and through a genuinely scientific method to bring about an advance in knowledge.

A characteristic work of the mid 16th century was that of the Englishman Edward Wotton (1492-1555), published in 1552. He divided the insects into six groups in a neo-Aristotelian fashion, using mouth-part conformation as his criterion. His group 4 is defined as "insectae, quae promuscidem seu aculeum in ore gerunt: muscae, culices, cicadae, locustae, traxales." His chapter ccxiii deals with flies, where he defines two groups: "culex" for the nematocerous and biting flies, and "musca" for the rest.

Entomological science was considerably advanced by the Italian Ulysse Aldrovandus (1522-1605), a pioneer of pure research. In book 3 of his *De animalibus insectis* (1602) he defined his major groups. A preliminary table included "musca, tabanus, culex, ephemera" as a group of two-winged insects. In his text he further defined this group as having no elytra and two wings ("de anelytris, bipennibus"). He discussed "musca," of which he illustrated 72 species (pp. 345-351), but also placed in the same group certain other "similar" four-winged insects: mayflies were grouped with "musca," whilst scorpionflies, lacewings, and some ruby-tailed wasps were included with "culex." His "culex" group differed from "musca" by the harder proboscis and more painful bite.

Similar advances were made in England by Thomas Moufet (1553-1604), whose major work was published posthumously in Latin in 1634 (also in English in Topsel 1658). Three chapters (10-12) deal with "*musca*." Chapter 10 (Topsel version, 1658: 931) contains a delightful anthropomorphism about the fly: "The light, like Truth, he doth exceedingly rejoyce in, and doth

behave himself honestly therein and civilly". Chapter 11 "de muscorum differentiis" is concerned with the different kinds of flies known to him. He appears not to discuss the house fly, but his "musca" is used in a very broad, almost vernacular, sense and is not confined to two-winged insects. His illustrations of "musca" show various Diptera (flesh fly, dog fly, bee fly, etc), caddisflies, scorpionflies, mayflies, parasitic Hymenoptera, alderflies, dragonflies and damselflies, sawflies, and even a cockroach. His text mentions "Musca lupus," "carnivora," "canum," "equina," "bucularia," though these are used descriptively, and also the related groups "Asilus," "Tabanus," "Oestrus."

The invention of the microscope in Holland at the end of the 16th century opened up new areas for investigation, and the foundation of several academies and scientific societies encouraged dissemination of the results. The Italian F. Redi (1626-1698) was the first entomologist to exploit the microscope. He demonstrated that insects do not arise from decaying matter, but from eggs deposited on suitable substrates by the adult females (Redi, 1668): the era of spontaneous generation was finally over! He illustrated the adult, larva and pupa of a "Musca cerasorum" attacking cherries [Tephritidae]. The section of his work dealing with "moscas" (Redi, 1778 edition) discussed oestrids and mosquitoes, and also the true flies that produce the maggots in meat and corpses.

Two Dutchmen, J. J. Swammerdam (1637-1680) and A. van Leeuwenhoek (1632-1723) further exploited the power of the microscope. Swammerdam (1685) classified the insects into four classes, according to their metamorphosis, and this reflects real advances made in the acquisition of biological knowledge. His "ordo IV, nympha-vermiformis" comprises "musca latrinarum, asili, tabani, equina, stercoraria, acarus." The text of his work discusses many different kinds of "musca," including mayflies and scorpionflies, so it is clear that he too was using "musca" in a vernacular sense here. He knew the flies that come from larvae in rotting meat and that live as parasites in other insects, but did not mention the house fly. He described (1685: 189, plate 11) the egg, larva, and puparium of "Musca vulgaris latrinicolae" (in index as: "Musca latrinicola vulgaris"), which is clearly a species of Fannia and probably scalaris (Fabricius) ("colorisque est nigricantibus, sed quadam canitie temperati"). The great microscopist Leeuwenhoek (1719: 104-119) discussed "muscas domesticas" and other "muscae."

A further advance came with the work of the Englishman John Ray (1628-1705), who followed Swammerdam in erecting a system based on morphological and biological facts. Ray is credited with being the first

zoologist to recognize the species and genus as systematic units, defining the species as a collective idea for the offspring from the same or identical progenitors and the genus as a group of species that resemble each other. His great work was published posthumously (Ray, 1710). Flies, "muscae," are divided into those with two wings and those with four. The section of "muscae bipennes" (p. 266) describes 39 species. These include "musca carnaria vulgaris," the common flesh fly (Sarcophagidae), and "musca bombylium referens, humeris rufis, cauda albicante," a bee fly (Bombyliidae) that occurs in early spring. On p. 274 the section "muscae quadripennes" begins, e.g. "musca quadripennis, alis longis angustis Papilionum in modum variegatis." A number of parasitic "muscae" are described in the "Vespa ichneumon" group (p. 256-262).

Alongside the work of these system builders — the architects — other work, less ambitious in its aims but equally worthy, was being carried out by the builders of the individual bricks in the edifice of knowledge — the artisans. These further illustrate just how broad the concept of "musca" still was in the 17th and early 18th centuries. C. Schwenckfeld (1603) described the insects of Silesia, illustrating a series of species of "musca." Whilst his "musca" was defined as having two wings ("insectum volatile, bipenne"), many of the insects he included were four-winged: "Musca infectoria, eine Schmeissfliege" (Sarcophagidae), "Musca viridis, eine grüne Fliege" (Calliphoridae), "Musca versicolor, eine schöne bundte Fliege" (?Syrphidae), "Musca ligniperda, eine Holzfliege/Borfliege" (Hymenoptera), "Musca grandior oculata" and its many forms (Odonata), "Musca caudata, eine Schwanzfliege" (Plecoptera), The Dutchman J. Goedart (1620-1668) described 144 numbered experiments in insect breeding (1662a, b, c; English translation by Lister, 1682). He used no names: the description of the immature stages and adults were accompanied by illustrations, and he referred simply to "the fly opposite" or to the fly in the plate. One experiment (1682: 123-124, no. 130) concerned the little house fly, Fannia canicularis. and is worth quoting in full:

I had a mind to try, what wou'd become of the putrid and corrupted Urine of a man; I made a Funnell of paper, and so folded it, that no Fly or other Animall cou'd get into it: having infused into it oft times humane Urine; I found some some Worms to be bred in the folds, where the feces stayed. I reserved one of them, for the experiment sake, which composed it self for change, the first of March: and the 14th. of the same moneth, it had the forme of a Fly, depicted in the Table: its head was Red, the body Black, and the hinder-parts Yellowish.

Another Dutchman, S. Blankaart (1688) published a delightful little book with coloured plates and a text in Dutch, dealing with the immature stages of various insects. No. XXIII, page 81, plate 10 (of larva, puparium, adult)

concerns "van de Worm met het Vliegjen uit de Hoender mest gewassen" and is obviously Fannia scalaris. No. XXII, page 78, plate 10 (of larva, puparium, adult) deals with a rat-tailed maggot, "van de Swijn made mit sijn Tonnetjen en Vlieg," and this has the only Latin epithet of the book, "Musca apiformis." Finally, a German work by J. L. Frisch (1660-1743), published between 1720 and 1738, described biologies of various insects. The house fly appears not to have been described, but there is, for example, a Sarcophagid with illustrations of the larva, spiracles and adult, "von den Schmeiss-Fliegen mit grau- und schwartzwürflichen Hinterleib" (1728: 21, plate 14). Another, described as "Die Fliege ist gläntzend-schwartz, so herauskriecht," could be Hydrotaea (1732: 8, plate 6, "von einer kleinen Art der Aas-Fliegen").

The last great figure before Linnaeus was the Frenchman R. A. F. de Réaumur (1683-1757), a prolific and enormously influential scientist. He stressed, above all else, the importance of personal observation and personal experience. His Mémoires consist of a series of morphological and biological observations, written in French and with a vernacular nomenclature ("Mouche," "Mouches," "genre des Tipules"). In his treatment of "mouches" (1738) he divided them into a number of groups based on the mouth-parts. The two-winged flies that he recognized (e.g. blue bottles, house flies, mosquitoes) were assigned to the first two classes: (1) "mouches qui ont une trompe, & qui n'ont point de dents ou de ferres," and (2) "mouches qui ont une bouche sans dents sensibles." The other groups are filled with fourwinged flies such as scorpionflies, caddisflies, etc. The full range of his "mouches" can be seen on plates 8-11. Additional characters that he considered were the antennae, the mode of crossing the wings, and the body-length. He also discussed the biology of flies. Réaumur noted that there were viviparous and oviparous higher flies, observed the method of adult eclosion using the ptilinum, and reared blue bottles, green bottles, flesh flies, and house flies from meat. An interpretation of Réaumur's species, which included Musca domestica and a number of new species, was given by Vallot (1802).

Shortly before the appearance of the 10th edition of Linnaeus' Systema Naturae, another Frenchman, L. Joblot (1754), published a series of microscopical studies of insects, written in French, which illustrate the continuing, broad, multi-ordinal concept of "fly." Four species of "mouches" were described: "la mouche commune" (p. 9, pl. 5, Calliphoridae); "... mouche qui se voit ordinairement sur la surface du vin et sur celle du vinaigre" (p. 12, pl. 6, Drosophilidae); "... mouche aquatique et terrestre qui nage sur le dos, qui saute et marche étant hors de l'eau" (p. 22, pl. 11, Notonectidae); "... une autre espèce de mouche aquatique et terrestre" (p. 26, pl. 7, Corixidae).

# From Linnaeus to Meigen (1758-1838)<sup>2</sup>

In following the history of *Musca* during this period, one can trace a direct line of descent from Linnaeus to Fabricius to Meigen. Most authors followed the lead given by these three authors, sometimes adding small details to the system.

With hindsight, it is easy to see that the 10th edition of the *Systema Naturae* was a quantum-leap forward in systematic zoology, an example of "paradigm forming science" (Kuhn, 1962). Yet, at the time, its impact was neither instantaneous nor universal, and there is no caesura in the scientific literature at 1758. Carl von Linnaeus (1707-1778) only arrived gradually at his binominal nomenclature: originally using one word for the genus and up to 12 for the species, he refined this until he was consistently binominal in 1749 for plants (*Pan Svecicus*) and 1754 for animals (*Museum S:ae R:ae M:tis Adolphi Friderici*). In 1758, he gave a well-defined view of orders, genera and species, and a means for distinguishing the species. These conspicuous merits, together with his clarity of thought and limpidity of style, helped to promulgate both his system and his method.

Yet the 1st edition of *Systema Naturae* (1735) was not a great advance on contemporary knowledge and gave little indication of what would eventually follow. There was very scant attention to species. Linnaeus recognized four insect orders, defined by wing form: Coleoptera, Angioptera, Hemiptera, Aptera. Within each of these, he listed "genera," with a diagnosis and a note of the characteristic taxa. Nine "genera" are listed in the Angioptera, for example:

Ephemera. Cauda setosa, alae 4 erec-

tae.

Panorpa.

Cauda cheliformis, alae 4,

rostrum comeum.

Musca ephemera.

Musca scorpiurus.

The last genus is Musca (1735: 77):

Musca. Stylus sub alis capitatus.

A lae 2.

Musca diversarum species Oestrum vet. ------ lapponum Tabanus

Culex teredo navium Tipula. Formicaleo

It is curious to see the ant lion (Neuroptera: *Myrmeleon*) and the ship worm (Mollusca: *Teredo*) in this list!

<sup>2</sup> For more general discussion of this period, see Tuxen (1973) and Lindroth (1973).

la mouche

There was little change in editions 2 and 3, but in edition 4 (1744: 95) Linnaeus used the term Diptera for his ordo 6 and thus arrived at a conception of two-winged flies that is not much different from our own. He listed seven genera, but clearly had not yet clarified his ideas on nomenclature, using "Musca" at the species-level in a vernacular sense:

Genus 172. A silus Musca rapax l'A sille Genus 173. Hippobosca Musca equina la mouche arraignée Genus 175. Musca Os proboscide absque dentibus.

And even in other orders:

Musca

Genus 164. Ephemera Musca ephemera l'ephemère Genus 166. Panorpa Musca scorpiurus la mouche-scorpion

The first edition of Fauna Svecica (1746) marked a very striking advance on this. Of course, it was primarily a work on the Swedish fauna rather than a work on classification, and so the species are treated in great detail. There are 7 genera of Diptera, as in the preceding edition of the Systema, and the genus Musca is dealt with on page 313. Linnaeus describes 64 species in Musca, assigned to six groups: Alis variegatis; Hirsutae dictae; Variegatae; Aphidivorae; Auratae; and Vulgares. Each species is given a description, with references to earlier works, biology, distribution, etc. The nomenclature is not binominal in the formal sense, the Latin being purely descriptive, e.g.: Musca fusca, oblonga, nigra or Musca nigra; abdomine nitido tessellato, thorace lineis pallidioribus longitudinalibus; minor.

In Edition 6 of the Systema Naturae (1748) the treatment was more expanded when compared with the previous editions. Linnaeus listed several species in each genus, but still used Musca in a partly vernacular sense, e.g. Musca triplis in Ichneumon (p. 64) and Musca aestivalis in Phryganea (p. 62). The same seven genera were recognized in the Diptera, and Linnaeus was able to refer back to their descriptions in the Fauna Svecica (1746). Musca (page 66) is defined as follows: Os cum proboscide absque dentibus. The eleven characteristic species that are mentioned are arranged into the six groups (a, wing patterned; b, hairy; c, body patterned; d, aphidophagous; e, gilded; f, common) introduced in Fauna Svecica:

a. A lis variegatis

Musca aquatilis Musca solstitialis Musca cerasorum Musca stercoraria

b. Hirsutae

c. Corpore variegato

Musca mirabilis Musca putrida Musca latrinaria Proboscis elephantis [=Scaeva pyrastri] Musca carnaria<sup>3</sup>

d. Aphidivora e. Auratae f. Vulgares

Musca carnaria Musca domestica Vermiculus casei [=Piophila casei]

Editions 7, 8, and 9 (1748, 1753, 1756) were essentially identical with edition 6 so far as the treatment of *Musca* is concerned.

Linnaeus had used the wings to delimit the orders, and by the 10th edition (1758) he had come to use the mouth-parts to define his genera. His diagnosis for *Musca* (1758: 589), repeated with little change for the next half century, reads: "Os proboscide carnosa: labiis 2 lateralibus: Palpi nulli" (mouth with a fleshy proboscis: with two lateral lips: palpi absent). The division of the 100 species of *Musca* into sections (1758: 589, footnote) uses characters of the antenna and arista, and the body vestiture:

Muscae distingvuntur antennis inermibus 1. armatis Filatae antennis absque seta aut pluma laterali Armatae antennis cum seta aut pluma laterali

- Tomentosae corpore pubescentes, saepe vix manifeste
  - — Plumatis antennis pectinatae
  - Setariis antennis simplici seta
- Pilosae raris setis, imprimis in thorace conspicuis
  - — Plumatis antennis
  - Setariis antennis

Broadly speaking, species 1-13 are modern Stratiomyidae and Rhagionidae; 14-46 are Syrphidae; 47-55 are calyptrates, including *Musca domestica*; 56-100 are calyptrates and acalyptrates. It is worth examining the entry for

species no. 54, Musca domestica (1758: 596) to illustrate Linnaeus' comprehensive yet succinct

domesti- 54. M. antennis plumatis pilosa nigra, thorace lineis 5 obca.

foletis, abdomine nitidulo tessellato: minor.

Fn. fvec. 1106.

Aldr. inf. t. 2. f. 23.

Habitat in Europæ domibus, etiam Americæ.

Larvæ in fimo Equino. Pupæ parallele eubantes.

method of dealing with diagnosis, bibliography, distribution, and biology.

The second edition of his *Fauna Svecica* (1761) also adopted the new nomenclature. It was a descriptive work, not a classificatory work, and *Musca* was used in the sense of 1758. It is interesting to note that Linnaeus has been accused of failing to adopt his own binominal nomenclature consistently in this work, because an appendix (p. 545-556) contains a number of descrip-

<sup>3</sup> The gilded fly (e) is evidently not the flesh fly, our Sarcophaga carnaria, but a greenbottle, genus Lucilia (cf. Shakespeare's "King Lear" (IV, 6, 115), "the small gilded fly does lecher in my sight.")

this work, because an appendix (p. 545-556) contains a number of descriptions for which the new nomenclature was not used. In fact, even a cursory examination shows that these descriptions are taken from earlier works by himself and De Geer. For example, the description of "Musca alis albis" (no. 2311, p. 553) is identical with that of no. 1062, p. 315, in the 1st edition of Fauna Svecica. In fact, the title of the appendix states quite explicitly why this is done: "an appendix in which I have set apart animals that I have collected in former times, but which I have subsequently not found for further examination." In other words, Linnaeus, the conscientious taxonomist, did not care to offer diagnoses and names for species that he had not studied for years and that were no longer available to him. [Unfortunately, some subsequent workers were not so conscientious and provided names for these species.]

Several editions and translations of Systema Naturae followed, all of which attempted to maintain the Linnaean system whilst incorporating the advances and additional species described by other authors. The 12th edition, by Linnaeus himself (1767), offered no change in the definition of Musca, and described 129 species. The de Villers edition (1789) also followed the 1758 diagnoses and divisions, incorporated the works of De Geer, Fabricius, Scopoli, and Schrank, and described 398 species including new species and new names. The Gmelin edition (1790), the 13th edition, followed Scopoli's (1763) modification of the generic description, in particular "palpi nulli" became "palpis duobus brevibus" ("with two short palpi"). Gmelin also included new species, some new names, and some collection names from "Mus. Lesk.", the species numbered but not named by Zschach (1788). Manuel (1792, 1811) continued the Gmelin tradition with a French version of the species diagnoses. Turton (1801) published an English translation of the Gmelin edition but followed the classification of Fabricius (1794) for insects. Turton maintained the increasingly indequate definition of Musca by its mouth-parts and included 521 species. He marked the Linnaean species with \*, but otherwise gave almost no references to preceding authors. Thus, when an unfamiliar Musca-name is encountered, it is extremely difficult and time-consuming to determine if Turton is describing a new species, proposing a new name, or transferring into Musca a species already described in another genus, such as Syrphus (see discussion on page 43).

Linnaeus' foremost pupil was J. C. Fabricius (1745-1808). He worked hard to develop classificatory ideas based on mouth-parts, and was unwilling to admit that the use of other characters would contribute either to clarity or to a "natural" system: he considered that the greater the number of characters used, the greater would be the ensuing chaos. In his first work (1775) he

divided the genera of Diptera into two sections: "os proboscide atque haustello" (10 genera, including Musca) and "os haustello absque proboscide" (9 genera, including a few Arachnida). Apart from the proliferation of generic names, this is really scarcely different from Pliny's or even Aristotle's division of the Diptera! His diagnosis of Musca (1775: 773) marks a slight advance on Linnaeus: "Os proboscide atque haustello. Haustellum seta unica absque vagina. Palpi duo porrecti, extrorsum crassiores. Antennae setariae." Musca is divided into two groups: "antennis seta plumata" (including *domestica*) and "antennis seta nuda" [arista plumose or arista bare]. Very broadly, this divides calvptrates from acalyptrates, as almost all the modern Nematocera, Brachycera, and Aschiza originally placed in Musca were recognized as very different and were transferred to other genera (Bibio, Rhagio, Rhingia, Stratiomys, Syrphus). This framework was more or less followed in his subsequent works (1777, 1781, 1787), but in 1794 (and 1798) he offered several modifications to make allowance for a number of additional genera separated from Musca: "Haustellum seta unica absque vagina. Palpi duo porrecti, extrorsum crassiores. Antennae breves, clavatae, seta instructae." [Proboscis with a single bristle, without a sheath. Two palpi, porrect, thickened towards tips. Antennae short, club-shaped, with a bristle.]

His final work on Diptera (1805) was a monograph of the entire order. 81 genera were dealt with, including 5 now in Arachnida, and there is further refinement of the concept of *Musca*. Two generic diagnoses (1805: xii & 283) embrace the characters: "Os *haustello absque vagina*. Palpi *porrecti, compressi, ciliati, biarticulati, extrorsum crassiores, obtusi*. Antennae *breves, incumbentes, triarticulatae: articulo tertio elongato, compresso, oblongo*." A footnote on p. 283 gives a detailed description of *Musca*. The genus is placed after *Stomoxys* and before *Tachina* and *Ocyptera*. His old division within the genus, of species with plumose arista or with bare arista, is still kept, but on this occasion there are 76 species (including *domestica*) in the "plumose" section and 45 in the "bare" section. These sections are close to the longstanding 19th century division between Muscidae and Anthomyiidae, though considerable more refinement, with the removal of many acalyptrates, was carried through by Meigen.

Contemporaneously with Linnaeus and Fabricius, entomologists were beginning to investigate in more detail their local faunas and the biology of insects. Few had a grasp of insect systematics in any way comparable with that of Linnaeus and Fabricius, yet several of them produced noteworthy insights. As always, there were those who welcomed innovative and constructive change and those who clung stubbornly to familiar certainties.

Charles De Geer (1720-1778), who saw himself as the successor of Réaumur, published a series of observations in 7 volumes of *Mémoires* (1752-1778). He gave diagnoses in Latin in a pre-Linnaean style, and volume 3 (1773) is accepted as the first to use binominal nomenclature though it is evident that De Geer was not fully happy with it, or, more probably, was simply indifferent. His method was to give a French and Latin diagnosis, as for *Musca pinastri*:

MOUCHE velue à poil simple ...
Musca (pinastri) ...

He sometimes gave replacement names for those Linnaean names that he felt to be inappropriate (see also the discussion in Persson, Pont & Michelsen, 1984):

Mouche très-velue ... = [French diagnosis]

Musca (bombylius) ... = [New name & Latin diagnosis]

Musca (mystacea) ... = [Linnaeus' name & diagnosis]

Occasionally he lapsed into trinomials, e.g. Musca domestica major [i.e. Musca domestica Linnaeus] contrasted with Musca minor domestica [i.e. Fannia scalaris Fabricius] (see discussion below under workers). His names were tabulated in Linnaean style by Retzius (1783). Volume 6 of the Mémoires (1776) dealt with Musca, and De Geer followed Geoffroy (1762) in his diagnosis of the genus: "Antennes à palettes avec un poil latéral. Trompe à lèvres charnues." He accepted four subgroups based, as in Linnaeus, on aristal and body vestiture. The German translation of this volume (Goeze, 1782) made no change to the nomenclature or presentation.

Among the many enumerations of local faunas, the diagnosis of *Musca* by Linnaeus (1758) was followed closely by Poda (1761) working in the Graz area of Austria; Sulzer (1761) in Switzerland, who also gave fine illustrations of members of each of the 5 subgroups that he recognized; Houttuyn (1761-1763) in the Netherlands; Brünnich (1764) in Denmark, in a remarkably comprehensive and succinct textbook of entomology that included parallel keys in Latin and Danish to insect genera and their subgroups; Müller (1764, 1776) and Pontoppidan (1765), also in Denmark; Füesslin (1775), Sulzer (1776) and de Razoumowsky (1789) in Switzerland; Schrank (1781) in Austria; Schellenberg (1803) in Switzerland, in a series of beautiful colour plates of species belonging to *Musca*. Even Panzer (1794-1806) took an essentially Linnaean view of *Musca*, though the later volumes of paintings followed Meigen's genera (see the list of Panzer species compiled by Saunders, 1888). Shaw (1806) still used *Musca* exactly as diagnosed by Linnaeus almost 50 years earlier.

The Englishman Moses Harris (1776-1780) followed the Linnaean system and concept of *Musca*. However, he departed from Linnaeus in his classification of the components of *Musca*. Harris was the first entomologist to recognize the importance of wing venation as a character system for classification. Whereas Linnaeus divided *Musca* into 7 groups based on antennal (arista) structure and body pilosity, Harris divided the genus into 9 groups based largely on wing venation. He divided the genus into orders and the orders into sections, and for each he gave an enlarged figure of the wing venation. He did not describe the venation, merely referring to the figure. In the text, he frequently gave additional characters for his groups.

## Harris' subgroups of Musca

Order I	Calyptrate flies with anteriorly curved M
Order II	Genus Volucella (Syrphidae)
Order III, Section 1	Syrphidae (Eristaliini) with arista pilose
Order III, Section 2	Syrphidae, with arista bare
Order IV, Section 1	Stratiomyidae with scutellar spines
Order IV, Section 2	Stratiomyidae (Beridinae) without scutellar spines
Order V, Section 1	Acalyptrates (complete anal vein, parallel wings)
Order V, Section 2	Calyptrates (incomplete anal vein, divergent wings)
Order V, Section 3	Dolichopodidae

Unfortunately his work was ignored by Fabricius and subsequently forgotten. Fallén and Meigen rediscovered the importance of wing venation. Harris used binominal nomenclature, that is, he used single words for species names. However, he gave genus group names in the plural (*Muscae*, *Asili*, *Tabani*, *Tipulae*) and his species names included not just nouns and adjectives but also verbal forms (*restituo*, *timeo*, *recurro*) and adverbs (*delicate*, *scitule*, *semulater*) which renders them unavailable according to the current rules of nomenclature. Harris also provided some interesting biological observations. Under his section 1 of *Musca* (which included mostly Tachinidae), he concluded that the large compound eyes in flies were not for vision but that the simple ocelli were: he put opaque white paint on the eyes of a blue-bottle fly and noted that the fly was still able to fly directly to the window, whereas this did not happen when the ocelli were covered.

The Linnaean definition of *Musca* was substantially modified by Geoffroy and Scopoli. Geoffroy (1762) separated several groups (*Stomoxys*, *Stratiomys*, *Volucella*) from *Musca* and introduced new characters into his definition of the genus, stating that it was to be recognized by a combination of characters:

<sup>4 &</sup>quot;Moses Harris never ought to have been ignored in the Diptera, in which he was more than an equal with his contemporaries in nomenclature while he was almost 50 years in advance of any other dipterologist in venation" (Verrall, 1901a: 571)

Antennes formées par une palette platte et solide avec une soie ou poil latéral. Bouche avec une trompe sans dents. Trois petits yeux lisses ... Il dépend de deux parties, savoir des antennes et de la bouche: c'est la configuration de ces deux parties qui constitue le caractère de la mouche."

Geoffroy divided *Musca* into families, but these subdivisions were essentially the same as those used by Linnaeus (1746, 1748). He did not use a binominal Latin nomenclature, so that his 88 *Musca* species were only validated when subsequent authors happened to mention them and give them Latin or latinized names (principally Geoffroy himself in Fourcroy, 1785; but also Schrank, 1781, 1803; de Villers, 1789; Müller, 1776; even Macquart, 1834<sup>5</sup>). For example: *La mouche à l'étoile* of Geoffroy (1762: 494, no. 3 *Musca cinerea, alis albis apice macula rotunda radiata*) is 1) *M. stellata* of Fourcroy (1785: 470, no. 3) and 2) *M. stellata* of de Villers (1789: 535, no. 333).

Scopoli (1763) advocated using all available structures for classification and modified the Linnaean diagnosis of *Musca*, pointing out that palpi are actually present: "Os vagina carnosa, retractili: apice labiata: basi palpigera" and (p. 325) "Os armatum rostro retractili: apice dilatato, basi palpigero: palpis clavatis." Scopoli (1763: 350, footnote) admitted that he was, unfortunately, unable to detect the mouthpart characters necessary to implement the Linnaean classification. He gave essentially the same diagnosis in a later paper (1777). The subdivisions of *Musca* adopted by Scopoli were very different from Linnaeus (1758). He utilized a wide range of structural features (position of wing at rest, abdominal shape & antennal posture) and made many valuable insights.

Schaeffer (1766b) followed both Geoffroy and Scopoli, for example including the presence of palpi and of three ocelli in his description. Yeats (1773) gave a collation of the Geoffroy, Schaeffer, Scopoli, and Linnaeus systems, and Müller (1775) gave a similar review incorporating the results of Houttuyn (1761-1763). Even in the late 1770's, works were appearing in which binominal nomenclature was not accepted, e.g. Schaeffer (1776a: plate 17, fig. 4 "MUSCA spathula antennarum truncata PRIMA. Erste Hausfliege mit abgestutztem Spadel."). Even Barbut (1781), in an exposition of the Linnaean system, listed one of his three cited Musca as "Musca vespae similis," which is actually Musca vespiformis Linnaeus. Grossinger (1794), in a manual of entomology covering systematics, biology, practical importance, ecology, etc., used Musca in the Linnaean sense but mentioned neither Linnaeus nor Fabricius: His sources were Aldrovandus, Swammerdam,

<sup>5</sup> See Onesia fulvipennis sp. n. (Macquart, 1834: 175), "Musca no. 60 Geoff. En automne sur le lierre"; but already given the name Musca hederacea by Geoffroy (1785: 491).

Schwenckfeld, Goedart, Frisch, and, amongst the "classical" systematists, Poda.

The Fabrician era, as already mentioned, saw a proliferation in the number of genera and a progressive refinement in the definition of Musca, culminating in Fabricius (1805). Gradually, Fabricius' more restricted concept of Musca supplanted that of Linnaeus, Herbst (1787) gave a German diagnosis of Musca, using characters of the antennae and mouth-parts, and pointed out that Musca of Linnaeus was the equivalent in Fabricius (1777) of Bibio, Stratiomys, Rhagio, Syrphus and Musca. Forster (1788, 1794) and Roemer (1789) gave an identical diagnosis of Musca: this is a very pragmatic version, combining elements of Linnaeus, Fabricius, and Geoffroy. Fabricius (1787) was followed by Rossi (1790, 1794) and Illiger (1807), Petagna (1792), Fabricius himself (1794) and Cederhielm (1798). Schrank (1803) added several characters to the diagnosis of Musca, such as the conformation of the abdomen and halteres, but these were not discussed by Fabricius (1805). Nor could the elderly Fabricius accept the much more radical proposals put forward by Meigen (1804), though these two discussed their views and their differences in the course of personal meetings.

Zoologists working in France during the late 18th and early 19th centuries were system-builders, and by using characters from all parts of the insect anatomy were moving towards a more "integrated" system. Lamarck (1801, 1816) and especially Latreille (1796, 1802, 1809, 1810, 1818, 1825, 1829) were the most prolific and influential figures. Latreille was the first to introduce the concept of the "family," and was highly adaptable, modifying his views from work to work as knowledge of the groups advanced. The definition of Musca was based on Geoffroy and Fabricius, and typically runs as follows: "Antennes à palette, composées de trois articles, dont le dernier porte une soie latérale. Trompe membraneuse, à orifice bilabié, rétractile en entier. Sucoir d'une ou deux soies. Deux antennules insérées sur la trompe." (Lamarck, 1801: 310). Within this Lamarck recognized two sections of Musca, one with a plumose arista (citing Musca domestica) and one with a bare arista. Latreille (1796: 170; 1802: 452) was the first to use the size of the calypters as a feature in classification, and this is still reflected in the "Calyptrate" and "Acalyptrate" sections of the Muscomorpha (Schizophora). At this time he was using Musca in an early Fabrician sense, but as the number of genera multiplied during the first decades of the 19th century he adapted his own classification to accomodate them (Latreille, 1809, 1818, 1825). Latreille generally cited vomitoria sensu Fabricius (often with other species) as the typical species of Musca.

In a curious work, Walckenaer (1802; see also Bezzi, 1907) transferred 7 species of "Musca," including domestica and vomitoria, to Latreille's genus Lispe, retaining 25 species (including modern Tachinidae, Muscidae, Scathophagidae, Acalyptrates) in the old genus Musca. The old-fashioned work of Samouelle (1819) also had its roots in this era.

Carl F. Fallén (1764-1830), who specialized in Swedish Diptera, recognized Ocyptera and Tachina as distinct from Musca (1810, 1817, 1820-1825) but was otherwise rather conservative in his approach. He eventually described 133 species of Musca, dividing them into major groups according to the course of vein M (Fallén, 1817, 1820): M with an angular bend forward towards vein R4+5, M with a rounded forward curvature, or M running straight to the wing-margin. This is, of course, a very useful division, but Fallén's distinction between Tachina and Musca was very woolly so that his Musca still included many modern Tachinidae, Sarcophagidae, and Calliphoridae as well as Musca domestica and its allies; he placed Musca tempestiva in the group with more roundedly curved M.

The great J. W. Meigen (1764-1845), the founder of European dipterology, gave a preliminary review of genera (Meigen, 1803) in which he separated Musca from Miltogramma, Anthomyia, and Stomoxys, but still included in it the species domestica, carnaria (subsequently removed to his Sarcophaga), and caesar, etc. Shortly after this he critically reviewed (Meigen, 1804) the classifications of Linnaeus, De Geer, Fabricius, and Latreille and also discussed new characters in the venation, antennae, legs, etc, that he had discovered (Meigen, 1804, 1818). His definition of the family "Muscides" (Meigen, 1824: xi-xii) is equivalent to the genus Musca of his predecessors, and he divides the old "Musca" up into a large number of genera (1826: ix). Genera in which vein M is curved forward towards vein R<sub>4+5</sub> (Idia, Mesembrina, Sarcophaga, Dexia, Musca) form one group, and genera in which vein M is straight (Anthomyia, Coenosia, etc.) form another, Indeed this division, later formalized as "Muscidae" and "Anthomyiidae," lasted until 1894 when Girschner discovered that the presence of meral (hypopleural) bristles would separate the tachinoid families from the muscoid families, and Musca (Muscidae) was definitively separated from Lucilia, Calliphora, and Pollenia (Calliphoridae) (see also Collin 1948). Musca was defined by Meigen (1826: 49) as follows, a definition not very different from his early (1803) diagnosis:

Fühler aufliegend, dreigliederig: das dritte Glied verlängert, stumpf, prismatisch zusammengedrükt: an der Wurzel mit einer gefiederten Rükkenborste. Hinterleib eirund, borstig. Flügel halb offen, mit einer Querader an der Spizze.

Musca was now a very much more restricted taxon, comprising the modern Calliphoridae (except Rhiniinae) and Muscidae with a forwardly-curved vein M. Meigen recognized two subgroups, one of shining green unmarked flies (A) and one of differently-coloured flies with striped mesonotum (B); each was further subdivided into those with an angular bend to vein M (a) and those with a rounded curve (b). Musca domestica and its relatives were placed in group Ba, together with most of the modern Calliphoridae, whilst Musca tempestiva was assigned to group Bb, alongside the present genera Morellia and Muscina.

Meigen's work was enormously influential and was followed by most of his contemporaries and successors. Wiedemann (1830) gave no diagnosis of *Musca*, but followed Meigen's generic arrangement and the groups within *Musca* for his own work on the non-European species. Two important checklists of British insects followed Meigen (Stephens, 1829a, 1829b; Curtis, 1831, 1837), and his was the classification adopted in faunistic lists and reports: Brullé (1832), Haliday (1833), Eversmann (1834), Bouché (1834), Curtis (1835), Wilson (1835). Even Latreille (1829) was modified in English translation to incorporate Meigen's genera as subgenera (Griffith, 1832).

Two other figures were important during this period, both Frenchmen: the brilliantly eccentric A. J. B. Robineau-Desvoidy (1799-1857) and the more pedestrian but conscientious J. Macquart (1778-1855).

Robineau-Desvoidy's youthful and genial Essai sur les Myodaires was completed when the author was in his mid-twenties but was not published until it had been submitted to a protracted series of committees, It is a long and complex work, characterized as "impenetrable" by Brullé (1832). Even before its publication, Latreille (1829) criticized it on a number of grounds: the use of imprecise characters, the formation of groups based on habits, colour and other vague features, the re-naming of previously established groups. Others found the proliferation of genera and the huge number of species unacceptable and criticized the description of almost every species as new, without consideration of the preceding work by Fallén and Meigen. The Essai is a monograph of the Muscomorpha (Schizophora): of its 813 pages, some 40% are devoted to our modern Tachinidae and 75% to the Calyptrata. What Meigen treated as his Muscides with vein M curved forward (the 19th century "Muscidae") comes at the end of Robineau-Desvoidy's 1st division Calypteratae (section Sarcobiae & Coprobiae, "families" Theramydae (in the Vivipara) and Muscidae (in the Oviparae)), and includes 46 genera where Meigen had 5. Meigen's Muscides with vein M straight (the 19th

century "Anthomyiidae") becomes the entire 2nd division Mesomydae and includes 44 genera where Meigen had 6.

Interpretation of Robineau-Desvoidy's taxa is bedevilled by the almost total destruction of his collection and it was only in the early decades of this century that most of his genera were recognized and either brought into use or assigned to synonymy. With prolonged study it is possible to interpret most of his work in a rational and logical way.

One section of his Muscidae is termed "Muscidae armentariae," defined by features of the antennae, arista, head-profile, proboscis, and venation. This consists of four genera, which are all now included within *Musca*. It has to be admitted that their definition is poor and recognition is only practical when combined with the species descriptions and habits:

Plaxemya.	1 species.	Now recognized as a species-group within
		Musca.
Byomya.	3 species.	Also recognized as a species-group within
		Musca.
Sphora.	2 species, from Australia.	Both now synonymized with Musca
		domestica.
Musca.	13 species, European and	
	exotic.	All now synonymized with Musca
		autumnalis and Musca domestica.

This is a very restricted view of *Musca*, and one which is not even accepted nowadays, though almost a century later Malloch and Townsend did attempt to restrict *Musca* to *domestica* and to raise the related segregates to generic rank.

Robineau-Desvoidy fell out with his contemporaries, especially his fellow-Dipterist Macquart, and became increasingly isolated and eccentric both scientifically and socially. He died prematurely, worn out by his selfless work as country doctor in an impoverished and unhealthy district and embittered by the rejection of his work by his scientific peers. They were unable to accept or even comprehend his many genera, though the more obvious segregates were picked out and used either as genera or as subgenera (e.g. *Lucilia*, *Pyrellia*, *Pollenia*, *Calliphora*).

Macquart (1834, 1835), by combining the best elements of Meigen and Robineau-Desvoidy together with his own insights, arrived at a concept of *Musca* (though not a definition) that is in no way different from that in use today. He gave a key to the genera of "sous-tribu Muscines" (1834: 9) that distinguishes *Musca* by having the arista haired on upper and lower surfaces, 1st posterior cell (cell r<sub>4+5</sub>) almost closed, and antenna long with basoflagellomere 3 times as long as pedicel. He accepted Robineau-Desvoidy's genera *Pollenia*, *Calliphora*, and *Lucilia* (now Calliphoridae), and assemed

"Musca" species with a smoothly curved vein M to a new genus Curtonevra. Writing of Musca, he stated "ce genre ... est arrivé ... à ne contenir que la Mouche domestique et quelques espèces voisines" (1834: 19). He gave a key to Robineau-Desvoidy's segregates of Musca, perceptively noting the haired eyes and unusually hyaline wings of the species vitripennis Meigen (Plaxemya of Robineau-Desvoidy). He retained the species tempestiva Fallén in Musca though several later authors were to transfer it to Curtonevra because of the less angular forward bend of vein M.

Much of this material was repeated in 1835, though he there gave a slightly more elaborate description of *Musca* to include the head profile (epistoma not or little projecting) and mentioning that the forwardly-curved section of vein M is generally recurved (Macquart, 1835: 235).

In his final work, Meigen (1838: 290-291) discussed the subdivisions of *Musca* proposed by Robineau-Desvoidy and Macquart and went a little way to accommodating some of them. He used the names *Lucilia* and *Pyrellia* for his greenbottle subdivisions (Aa and Ab); he accepted *Curtonevra* (Bb) (with segregates: bare eyes and hairy eyes) and retained *Musca tempestiva* here; and he accepted *Pollenia* as a distinct segregate within *Musca*, which was otherwise retained in the broad sense of his 1826 work (Ba).

During the latter part of this period (1800-1840) there was no awareness that the principal domestic flies — the house fly (*Musca domestica*) and the bluebottles (*Calliphora* spp.) — might belong to separate groups. Although there was no sense of a formal "type-species" as we now understand it for the genus *Musca*, entomologists did have a feeling for a type or typical species, and both *Calliphora vomitoria* and *Musca domestica* were regarded as typical species of *Musca*.

#### Meigen to Stein (1838-1921)

There followed a very long period during which few advances were made in the systematics of *Musca*. The genus had been refined to *domestica* Linnaeus and its immediate allies, and it was realized that the European fauna was very small. The interest of system-builders and describers alike centered on other groups and on the wealth of tropical forms being brought back to European collections by travellers and colonial settlers.

The most prolific describers of exotic species were J. Macquart, F. Walker (1809-1874) and J. M. F. Bigot (1818-1893). Macquart (1843) gave a tabulation of genera, which shows that he was still satisfied with his earlier definition of the genus, and he did indeed find that all the exotic species submitted to him (about 20; Macquart, 1843, 1846, 1851, 1855) "se rappro-

chent plus ou moins de la mouche domestique ou de la mouche corvine". Despite his tendency to describe the same species several times and to create homonyms, it is fair to say that Macquart's work was of a much higher quality, in terms both of his perceptions and his procedures, than that of Walker and Bigot. Walker (1849) used Musca in Meigen's very broad sense and incorporated Robineau-Desvoidy's (1830) divisions and genera as subgroups of Musca into his attempt to arrange world material. Thus, within Musca s. lat. he had a section "Muscidae armentariae" in which he listed the generic names Plaxemya, Byomya, Sphora, and Musca, describing several new species within this restricted Musca but without understanding or offering any interpretation of the other Robineau-Desvoidy names. Walker re-iterated this broad concept of Musca in two subsequent papers (Walker, 1853a, 1853b) and followed it in all his descriptive papers. This concept was hardly progressive, since large numbers of Musca were described that are now scattered in the families Calliphoridae and Muscidae, and even Sarcophagidae and Tachinidae, and the original combination and description give little indication of the actual affinities of each new taxon. Bigot's work too contributed little to progress. In his major paper on the group (Bigot, 1888a), he discussed the families Stomoxydae and Muscidae, the latter being the equivalent of Meigen's genus Musca. His key to the genera of Muscidae gave a taxonomic definition of Musca based entirely on Rondani (1856 - see discussion below), but he failed to clarify the identity of Byomia [sic] Robineau-Desvoidy, which he considered most likely a synonym of Musca, and he assigned Plaxemyia [sic] Robineau-Desvoidy to his Stomoxydae.

In Europe, the writers of entomology treatises and textbooks followed Meigen, with Macquart's modifications. For example, Westwood (1840) listed 6 genera in his "Muscies," Lucilia, Calliphora, Musca, Pollenia, Mesembrina, Curtoneura. Blanchard (1840) had a less clear-cut concept of Musca, giving a diagnosis and including the three species vomitoria [Calliphora], domestica [Musca], and meridiana [Mesembrina]. Morris' (1865) list of British insects followed Meigen precisely.

J. W. Zetterstedt (1785-1874) worked for many years on the Diptera of Scandinavia. His first definition of *Musca* (Zetterstedt, 1838: 652) alluded to some 50 Scandinavian species. Of the 31 enumerated in this work, several belong to the modern Tachinidae, Rhinophoridae, and Calliphoridae. His family "Muscariae" (Zetterstedt, 1842: 5) was equivalent to Meigen's genus *Musca* and he recognized six genera: *Lucilia*, *Pyrellia*, *Musca*, *Mesembrina*, *Cyrtoneura*, *Cinochira* (Zetterstedt, 1845: 1312). This is based on Macquart. He defined several subdivisions of *Musca*: thoracic dorsum tomentose (*Pollenia*), thoracic dorsum not tomentose and palpi yellow [various Cal-

liphoridae], and thoracic dorsum not tomentose and palpi black [domestica, corvina, and the Calliphorid azurea]. He assigned the species Musca tempestiva to Cyrtoneura because of its more roundedly curved vein M.

The work of Camillo Rondani (1807-1879), which was concerned mainly with Italian Diptera, marked a real step forward in the systematics of the Muscidae and Anthomyiidae. Not only was his method excellent — keys to genera and species, descriptions of all taxa, and type-species listed for the genera — but he discovered new and significant characters on which to base his re-classification of the groups. His treatment of *Musca* illustrates this. His key diagnosis of the genus (Rondani, 1856: 89) gives the following combination of characters: mid tibia without an internal (i.e. ventral) bristle, and 5th longitudinal vein (vein M) with an angular forward curve. This is precisely the definition still given for the genus (e.g. Hennig, 1963: 905; Emden, 1965: 39). In fact, Rondani recognized two genera where we would now recognize one: eyes bare (*Musca*, 4 species) and eyes haired (*Plaxemya*, 2 species). In revising the species (Rondani, 1862: 220) he correctly included tempestiva in the genus *Musca* rather than in *Cyrtoneura*.

The Austrian I. R. Schiner (1803-1873) produced a work that became the standard manual on European Diptera until well into our own century (Schiner, 1862). He based his treatment of this group on that of Rondani and defined *Musca* as having the arista densely plumose on both surfaces, vein M with an angular forward bend towards vein R<sub>4+5</sub>, and mid tibia without bristles inside (Schiner, 1862: lxxxvii). He did not accept Rondani's division of the genus into two, but defined two species-groups that were in any case different from Rondani's *Plaxemya* and *Musca*: hind cross-vein (dm-cu) closer to the bend of M than to small cross-vein (r-m) (*domestica*, *corvina*), and hind cross-vein (dm-cu) midway between the bend of M and small cross-vein (r-m) or closer to the latter (*vitripennis*, *phasiaeformis*, *tempestiva*). This work was followed by many European workers for their own local faunas, e.g. Kowarz (1873), Verrall (1888, 1901b).

It is worth pointing out here that details of the venation still confused taxonomists, in particular the elbowed or rounded forward bend of vein M. The eremophilic Old World *Musca lucidula* was described by Loew (1856) as a species of *Cyrtoneura*.

In an uncompleted posthumously-published work Robineau-Desvoidy (1863b) returned to the genera of the "higher" Muscidae. He retained his division "Muscidae armentariae" with the three genera Plaxemya, Byomya, and Musca, giving diagnoses that are scarcely different from those of his 1830 work. He recognized one species of Plaxemya (vitripennis Mg.), 3 species of

Byomya (all synonyms of tempestiva Fallén), and 15 species of Musca (all synonyms of autumnalis and domestica, except for one subsequently transferred to Pollenia (Calliphoridae)). His system was largely followed by Lioy (1864), who produced a synthetic work, without originality and apparently in ignorance of most of the work of his fellow-countryman Rondani. Lioy's genera (Musca, Plaxemya, Byomya) and their diagnoses were taken directly from Robineau-Desvoidy's work. When asked for his verdict on Lioy's work (and his reason for ignoring it), Rondani replied that "c'est de la poésie."

Following from Schiner, the Austrians F. M. Brauer and J. E. von Bergenstamm dealt comprehensively with the European Tachinoidea, together with a large number of exotic forms, and their work also covered the groups of Muscidae with a forwardly-curved vein M. Their interpretation of *Musca* and allied genera was naturally based on that of Rondani and Schiner and they accepted Rondani's separation of *Musca* into two genera, though any merit in this division was obfuscated by inaccuracies in their differentiation (Brauer & Bergenstamm, 1889: 156):

Eyes bare, almost touching in  $\delta$ , separated in  $\mathfrak{P}$ , etc.

Musca L. s. str. Rdi., domestica L.

Eyes haired in  $\delta$ , pubescent in  $\mathfrak P$ . Frons of  $\delta$  moderately broad, very broad in  $\mathfrak P$ , etc.

Placomyia R.D. emend. (Plaxemya R.D.) vitripennis Mg.

This distinction was maintained to the end of their work (Brauer & Bergenstamm, 1893: 179) and the authors also included a check list of the species that they studied (Brauer & Bergenstamm, 1891: 419), which was useful insofar as it also indicated some of the early type/syntype material located in the Vienna Museum.

The last great systematic work of the century was by the Frenchman L. Pandellé (1824-1905) and comprised a monograph of the "Muscidae" (i.e. both calyptrates and acalyptrates) of France. He introduced a number of new characters from the chaetotaxy of the body, wings, and legs into the taxonomy of the Schizophora and also pioneered the study of male genitalia. Independently of his contemporaries, he discovered the value of the chaetotaxy of the body and legs, but the prolixity of his text and absence of any illustrations deprived him of any justly-earned credit for these findings. Pandellé (1898a: 20-23) gave a key to the genera of his division "Muscées" that was quite different from that of his immediate predecessors, using a wealth of characters that were mostly new. His "Muscées" included Mesembrina, Pyrellia (in a very expanded sense), Musca, Stomoxys, Gymnodia, Graphomya, and Muscina. His genus Musca (Pandellé, 1898b: 40) is entirely modern in its scope and with many features in the generic description that

were independently rediscovered by the next generation of taxonomists. Four species were included: *vitripennis*, *tempestiva*, *corvina*, and *domestica*.

Pandellé (1894, 1896) and Girschner (1894, 1896, 1897) were both influenced by the work on chaetotaxy of Osten Sacken (1881b, 1884) and independently arrived at the conclusion that muscids with an angular vein M and bare meron belonged to the Anthomyaires/Anthomyidae and not to the Tachinaires/Tachinidae as previously believed. In retrospect, it is apparent that Pandellé's proposals for the classification of the Schizophora were superior in several respects to those of Girschner. Nevertheless, it was Girschner's views, expressed succinctly and accompanied by clear and schematic drawings, that had the greater influence on 20th century dipterology.

The greatest stimulus to the work of the early part of the 20th century came from the biological investigations by the Russian J. A. Portschinsky (1848-1916). In an important pioneering paper published in 1885 (abstracted and discussed in German by Osten Sacken, 1887), Portschinsky drew attention to an apparent dual reproductive strategy in Musca corvina [i.e. autumnalis]: although normally laying some 24 large eggs, females in the south of Russia (Crimea and Caucasus) incubated a single large egg and laid a 3rd instar maggot. It is now clear, of course, that two species were involved here, as Portschinsky himself subsequently recognized (Portschinsky, 1910). He continued with his investigations of oviparous and viviparous Muscidae and of their coprophagous, saprophagous, and carnivorous larvae (Portschinsky, 1892, 1910, 1911), and his later work was reviewed by Townsend (1911). There is no doubt that this was enormously influential in alerting field entomologists to the biological interest of this group, at a time when the medical and veterinary importance of Musca-flies was increasingly being recognized and this gave a tremendous impetus to the fundamental work on the group that followed during the 1910s and 1920s.

Throughout this period (1885-1920) the dominant figure in the taxonomy of the Muscidae was the German Paul Stein (1852-1921), who specialized almost exclusively on this group and who single-handedly brought order to the chaos into which the group had sunk during the course of the 19th century. From the modern standpoint, Stein's concept of genera seems rather limited, but his grasp of species was remarkable. His papers were methodical and comprehensive and almost invariably contained keys; he travelled to the centers of European Dipterology in Germany, England, Sweden, and France, to study the types of earlier authors; and, towards the end of his life, he was able to produce a key to all the European Muscidae (Stein, 1916), a key to the world genera (Stein, 1919), and catalogues of the world species (Stein,

1919; in Bezzi & Stein, 1907). Stein was most interested in the "Anthomyiidae" (in the 19th century sense) and so *Musca* and allied genera were rather
peripheral to the main thrust of his work. He followed Schiner (1862) in his
concept of the genus *Musca*. Reviewing extensive collections from the
Afrotropical and Oriental regions, he was the first to realize how large and
diverse the genus might prove to be (and how very slipshod and inadequate
for the most part his precursors in tropical Muscidae had been). For the first
time (Stein *in* Bezzi & Stein, 1907) the Palaearctic *Musca* species were
catalogued, with an inventory of recognized species, *species incertae*, and
synonyms, a total of 46 names.

The first two decades of the century also saw the initiation of several other strands of work on *Musca* which did not come together until the work of Patton and Malloch in the 1920s. The American tachinid specialist C. H. T. Townsend was always interested in the importance of reproductive biology for systematics (e.g. Townsend, 1913) and on several occasions he briefly turned his attention to the genus *Musca*. He was an advocate of the concept of restricted genera and he realized from Portschinsky's account of *Musca corvina* [autumnalis] that the reproductive biology of this species was very different from that of *Musca domestica*. He erected the new genus *Eumusca* for this species (Townsend, 1911). A few years later, after studying published work on the Indian *Musca* species, he erected the genus *Viviparomusca* for the viviparous species *bezzii* Patton & Cragg (Townsend, 1915) and another genus *Awatia* for the species *indica* Awati (= planiceps Wiedemann) because it was a larviparous member of the *Philaematomyia*-group and had well-developed presutural dorsocentral setae.

Among blood-sucking Muscidae collected in the first decade of the century were species of *Musca* that could abrade vertebrate skin and suck blood, but at first it was not realized that these were true *Musca* rather than biting Stomoxyinae. Austen (1909) described a new genus *Philaematomyia* (for a species subsequently found to be identical with *crassirostris* Stein) which he characterized as "a remarkable connecting-link between the ordinary non-biting Muscinae and Stomoxydinae." He noted that the powerful proboscis could not pierce vertebrate skin but that the flies used the enormous prestomal teeth to cut the skin and then sucked up blood. He did not consider it to be particularly related to *Musca*. Brunetti (1910) described a new genus *Pristirhynchomyia* (for a species subsequently found to be identical with *conducens* Walker) which he considered transitional between *Philaematomyia* and *Musca*: he excluded both genera from the Stomoxyinae, though without giving any reasons. He noted that his species was also a "biting fly," unable to pierce the skin but able to enlarge existing wounds or sores.

It has been gradually realized that these features in biology and structure are progressive and that various evolutionary stages are represented within the genus *Musca*, as they are in other genera of the Muscini. The fragmentation of the genus on the basis of a few autapomorphies results in a series of typological units rather than monophyletic groups and does not reflect the evolutionary history of the genus.

Work in India by Awati (1915-1920) and Patton & Cragg (1912, 1913a, b) increased the number of species and paved the way for advances made in the 1920s. Awati's work was particularly important, since he looked in such detail at a wide range of morphological, anatomical, and biological features, but the lack of any reference material from his work has hampered the recognition of the actual species that he discussed: indeed, it is still not possible to interpret all the names that he proposed. Patton did an enormous amount of fieldwork and breeding of *Musca* species in South India and this bore fruit when he returned to England and began extensive studies on the taxonomy and systematics of *Musca*: he was able to combine his first-hand knowledge of reproductive strategies, biology, adult feeding habits, etc, with his systematic researches. Both authors used *Musca* in the broad sense defined by Stein.

#### The Modern Era (1921-1992)

A conflict between generic "lumpers" and "splitters," familiar in most groups of insects, developed during the 1920s, but a careful study of various character-suites among the species of *Musca* and a better understanding of the evolutionary trends within the genus soon gave rise to a delimitation of the genus which has remained stable now for 60 years. The various splinter genera defined during the 1920s are recognized at the level of subgenera or species groups.

The period up to 1937 was dominated by the Briton W. S. Patton (1867-1960). Through his first career in the Indian Medical Service, Patton developed an interest in all the higher flies of medical and veterinary importance (especially Muscidae and Calliphoridae) and these early years of practical work underpinned all his subsequent systematic research. His correspondence and exchanges with other muscoid workers of the day (E. E. Austen, J. Villeneuve, J. M. Aldrich, and especially M. Bezzi) showed him that the same species were often masquerading under several different names and that the names themselves were often applied in a quite haphazard and inconsistent manner. Believing that he understood the species and species limits sufficiently well, he studied the types and other material in European museums and private collections (Patton, 1922a, 1923a, 1923b, 1925). From

this basis he proceeded to publish revisions of the Oriental species (Patton & Senior-White, 1924; Patton, 1937a, b), Afrotropical species (Patton 1926, 1936), and Palaearctic species (Patton, 1933b, c). He also undertook more fundamental comparative studies of the male genitalia (Patton, 1932, 1933a), the antennae (Patton & MacGill, 1925), the evolution of the bloodsucking habit (Patton, 1934), and supervised a comparative study of the female ovipositor (Ho, 1938).

Patton was convinced that Musca as he understood it (and as Stein had understood it, and as the present generation still understands it) was an indivisible monophyletic unit. He put forward characters to support this contention, such as the autapomorphous presence of a large sensorium at the base of the antennal basoflagellomere (Patton, 1932) and also adduced arguments to show that the more striking biological features in Musca (such as viviparity and modifications in the female reproductive system, adaptations in the male genitalia, biting and bloodsucking) are progressive and, in the case of the blood-feeding, have arisen more than once within the genus. He recognized only three groups in the genus, the domestica-group, the sorbens-group, and the lusoria-group. In discussion he was able to persuade Bezzi that this was the right course, though Bezzi had earlier joined in the fragmentation process begun by Townsend. He dismissed Townsend's splinter genera with derision. But he could not reach any accord with Malloch and the two remained irreconcilable. It is clear now that even Patton misidentified a great deal of material: throughout his long career he re-identified, mis-identified, and changed his mind about species limits and names and his keys are generally poor, based on rather weak characters and difficult to use. Malloch too misidentified species. It is obvious that much of their argument over detail can be resolved once it is known what species they actually meant by particular names: for instance, both had dogmatic views over where "planiceps Wiedemann" should be placed, yet neither correctly identified this species and, as they were probably not even discussing the same species, their discord appears completely futile. On a higher systematic level, the argument resolves itself over the ranking of hierarchies, whether as species groups (Patton) or genera (Malloch). The present system, largely worked out by Emden (1939, 1965), represents a synthesis of the work of Patton and Malloch.

The Italian Mario Bezzi (1868-1927) worked on *Musca* at various stages of his career, mainly describing new species. He gave a key to all the Mediterranean and African species, and recognized a number of subgroups (Bezzi, 1911). Turning to the blood-sucking forms (Bezzi, 1921) he showed that the species of *Musca sensu* Stein were now distributed among two

subfamilies, Philaematomyiinae (*Philaematomyia*, *Pristirhyncomyia*, *Ptilolepis*) and Muscinae (5 genera). He subsequently (Bezzi, 1923) described another subgenus, *Lissosterna*, for the desert species *Musca albina* Wiedemann.

The work of the Scottish-American John R. Malloch (1875-1963) advanced knowledge of the family Muscidae to a quite remarkable degree and in two studies of the genus Musca (1924, 1925; further notes in 1929b, 1932) he showed the innovative approach and remarkable ability to perceive new characters that are evident in all his work. He discovered several valuable features for identifying and classifying species of Musca, some of which were adopted, albeit reluctantly, by Patton. He too was uncertain how to rank the groups that he could define: "It is difficult to assign a definite status to the segregates herein accepted, for, while some workers would consider them as valid genera, others would just as certainly rank them at most as subgenera, or even refuse to accept them as named divisions" (Malloch, 1924: 132). He proceeded to list them as genera (1924), then as subgenera (1925) but with Philaematomyia and Ptilolepis as separate genera, and then finally as full genera again (1929b), recognising a total of 8 genera (Musca, Byomya, Lissosterna, Plaxemya, Philaematomyia, Eumusca, Viviparomusca, Ptilolepis). This work was rejected by Patton, who regarded it as a falsification of the true relationships within Musca. Since both were handling in part misidentified material, it was not possible for them to find any common ground at all, though subsequent work has acknowledged merit in both approaches.

Two contrasting views of *Musca* appeared in 1937. Townsend summarized his views on the genera of the Muscini and divided *Musca* into eleven genera: *Awatia, Byomya, Eumusca, Lissosterna, Musca, Philaematomyia, Plaxemya, Pristirhynchomyia, Ptilolepis, Sphora,* and *Viviparomusca* (Townsend, 1937). Since these segregates were based on the study of a very few species and were founded often on biological or anatomical features, they have not been accepted by anyone. In the same year, Séguy (1937) produced a volume for *Genera Insectorum* that gave a catalogue of World Muscidae. He followed Malloch's (1925) concept of *Musca*, but ranked the blood-sucking *Ptilolepis* and *Philaematomyia* as distinct genera. For these three genera he catalogued a total of 92 species, with 164 names (valid and synonymous). The 92 species include a number that are no longer recognized in *Musca, species incertae*, misidentifications, and names that are now synonyms, whilst several names that do in fact belong to *Musca* were overlooked by Séguy.

The most significant work since that time has been done in England by F. I. van Emden (1898-1958). He gave a most sympathetic account of the work by Patton, Malloch, and Ho (Emden, 1939: 73-76) together with a comprehensive key to the Afrotropical species and pointed out that there was indeed no serious discrepancy between Patton's, Ho's, and Malloch's classifications of Musca. Apart from a very few anomalous, perhaps misidentified, species and the ranking of the categories, the three systems agreed very well. Emden was thus able to maintain Musca in the traditional sense and, by elaborating the characters discovered by Malloch and other authors, to define a series of groups within the genus, several of which are monophyletic. Where existing names were available for these groups, Emden used them as subgenera, thus recognising 7 named categories. In his treatment of the Oriental species (Emden, 1965) he adopted the same arrangement and recognized the same number of groups (subgenera) as had Malloch, though his definitions are far more comprehensive and sophisticated. It was only with the work of Emden that species-limits and species-nomenclature reached a level generally felt to be satisfactory though there are still areas (for example, the Oriental species of the Viviparomusca-group) where further work is required.

Most of the other published work over the last 40 years has been descriptive (more closely defining the known species and describing new species) and clarificatory (studying the types of older authors and elaborating distributions). Authors have adopted the same consensus view of *Musca* and, for the most part, of its subgroups. A different view of the subgroups was put forward by Zielke (1971c), who recognized only two groups, the *lusoria*-group and the *sorbens*-group (the latter including Patton's *domestica*-group). However, these groups were not defined, except in the most general way, nor did Zielke give any indication as to which species he assigned to each group. Hennig (1964: 978-982) sought to establish which of the subgroups of *Musca* were monophyletic and he used the results of Patton and Ho for his discussion of character-transformations. He too reduced the number of subgroups that should be recognized in the genus.

As a postscript, reference should be made to the contribution of larval studies to *Musca* systematics. The pioneer work by Thomson (1937, 1947) and Zimin (1948) was summarized by Emden (1965), who was able to list a larval autapomorphy to support the conclusion that *Musca* is a monophyletic genus: mouth-hooks asymmetrical, the left one shorter than the right one. A detailed treatment of the immatures has recently been given by Skidmore (1985), and a comparative account of the family by Ferrar (1987).

#### The type species of the genus Musca Linnaeus

As mentioned above at the conclusion of section 2, it was generally considered in the early part of the 19th century that the domestic flies *Calliphora vomitoria* and *Musca domestica* were the typical species of the genus *Musca*. Several examples have already been cited. The following interesting cases deserve to be quoted here.

The first formal statement of a species acting as type of *Musca* ("espèce qui ... sert de type") was by Latreille (1810), who named it as *Musca vomitoria* sensu Fabricius (i.e. Calliphora vomitoria Linnaeus: Calliphoridae). Curtis (1835) gave *Musca caesar* as the type (i.e. *Lucilia caesar* Linnaeus: Calliphoridae). Macquart (1834) had effectively restricted the genus to domestica and its immediate allies, but Westwood (1840) was the first formally to designate domestica L. as the type of *Musca*.

Now, one can argue indefinitely about what these authors meant by "type" and also what their interpretations of the various cited taxa may have been, but it remains a fact, as Townsend (1915) pointed out, that the first valid citation of a type species for *Musca* is of a species now placed in the family Calliphoridae. Townsend (1915) followed the logical consequences of this, prescribed by the existing rules of nomenclature: he transferred the generic name *Musca* to the Calliphoridae, to replace *Calliphora*, and proposed the new genus *Promusca* for *domestica* and its allies. It took 10 years of discussion and an ICZN Opinion (ICZN, Opinion 82, 1925) to uphold the common-sense view that *domestica* should be type species of *Musca* and thus to ratify a binomen that is almost as well known as that of *Homo sapiens*.

### The genus Musca Linnaeus

Musca in current status consists of 66 recognized species and 7 subspecies, for which 221 species-group names, valid and synonymous, have been created. Key works on the genus are: New World (Vockeroth, 1953); Palaearctic (Hennig, 1964); Japan (Shinonaga & Kano, 1971); China (Fan, 1965); Oriental (Emden, 1965); Thailand (Tumrasvin & Shinonaga, 1977); Philippines (Magpayo, Shinonaga & Kano, 1987); Afrotropical (Emden, 1939, Zielke, 1971c); Australian (Pont, 1973); Micronesia (Snyder, 1965); immatures and biology (Skidmore, 1965); bibliography (West & Peters, 1973); and ecology, classification and biotic associations (Greenberg, 1971). Most of the above need to be updated by reference to the various regional taxonomic catalogues: Nearctic (Pont (in press)); Neotropical (Pont, 1972); Palaearctic (Pont, 1986a); Afrotropical (Pont, 1980); Oriental (Pont, 1977b); Australasian/ Oceanian (Pont, 1989).

# Workers: Their collections and publications

The preparation of a work such as this requires knowledge of the workers and their collections and publications. Some of this knowledge can be derived from the publications themselves, but most of it is scattered elsewhere. To aid future workers, we have identified our sources of ancillary information below and in the references cited. The standard entomological bibliographic sources (Hagen, 1862-63; Horn & Schenkling, 1928-9 (corrections, Gaedike & Smetana, 1978 & 1984); Derksen & Scheiding, 1963-75) were used along with other special sources such as Stafleu & Cowan (1979-88), which was extremely useful for dating and verifying various editions of the earlier general natural history works. Two other old bibliographies were useful for identifying cryptic citations in the earlier literature (Cobres, 1782 & Dryander, 1796-1800). The collection information in Horn and Kahle (1935-37) and its supplements (Sachtleben, 1961, Horn *et al.*, 1990) is not repeated below.

#### Bigot, Jacques Marie Frangile (1818–1893)

Gilbert (1977: 33, 13 citations), Brauer (1899, collection notes); Maa (1963, notes on labels); Ackland & Taylor (1972, notes on types at Oxford); Crosskey (1971, collection, label & type notes), Thompson (1989, collection, label & type notes).

### Bouché, Peter Friedrich (1784–1856)

Gilbert (1977: 43, 1 citation). Remnants of his Diptera were acquired by DEI in 1937; Sachtleben (1944, biographical sketch).

### Curtis, John (1791–1862)

Gilbert (1977: 81, 9 citations), Blackwelder (1947, on British Entomology); Neboiss (1963, notes on Curtis Collection, now in Melbourne (MVM)).

### De Geer, Carl (1720–1778)

Gilbert (1977: 88, 11 citations); Clausen (1977: 514, data on curation, style of pins, and labels used by De Geer); Gurney (1956, last word on proper form of De Geer's surname); Persson, Pont & Michelsen (1984, notes on collection and nomenclature). De Geer's work was abstracted by Retzius (1783) following the Linnaean system.

De Geer began his work before Linnaeus formally elaborated his system of binominal nomenclature and consistently applied it to animals. Hence,

the names in the early volumes of the Mémoires are not binominal. Traditionally, however, workers have accepted the names in volume 3 onward as conforming to the Linnaean system (Persson et al. 1984: 91). Unfortunately, under the current rules of nomenclature (ICZN, 1985), De Geer does not consistently follow the principle of binominal nomenclature even in the subsequent volumes. De Geer used binary nomenclature, a single word for the genus, and, while he usually used one word for the species, sometimes a two-word phrase was used for the species name. In the genus Musca, he used the adjectives major and minor to distinguish between large and small varieties (Musca minor domestica and M. domestica major; M. major larvarum & M. minor larvarum; M. vivipara major & M. vivipara minor), but sometimes color and habitat descriptors were used (Tipula nigra aquatica) or habitat and structural descriptors (T. Agarici seticornis) or structural and pattern descriptors (T. clavata maculata). These two-word combinations are phrases, not separate words that together refer to a single entity as permitted under the rules (ICZN, Art. 11(h)v). However, for pragmatic reasons, we have followed tradition and accepted all two-word names as binominal and available, but have rejected as polynominal and unavailable all names of three or more words.

#### de Villers, Charles Joseph (1724-1810)

Gilbert (1977: 396, 3 citations). Collections stated to belong to "Tissier jr. (Lyon)" with duplicates in "Städt. Mus., Lyon" (Horn & Kahle 1936: 289), but we have been unable to verify this. No de Villers material is known to exist in the Musée Guimet d'Histoire Naturelle, Lyon, but, on the other hand, nothing is known of the collection's fate nor is it known definitely to have been destroyed (J. Clary, *in litt.*, 30 Oct. 90).

#### Doleschall, Carl Ludwig (1827-1859)

Gilbert (1977, 3 citations); some material collected by Doleschall is present in NMW and may represent syntypes of some of his species (Osten Sacken, 1881a).

### Donovan, Edward (1768-1837)

Gilbert (1977, 2 citations); Weiss (1927, fate of collection). Horn & Kahle (1935: 60) state that Donovan's collection was auctioned by J. C. Stevens in 1818. Details about the auction can be found in Chalmers-Hunt (1976a: 5, 1976b: 77), and a copy of the sale catalog exists in BMNH where some of the specimens ended up, including material used for Donovan (1805). Other Donovan material ended up in the Macleay Museum, Sydney (Horning, 1988).

## Drury, Dru (1725-1803)

Gilbert (1977, 9 citations); Weiss (1927, notes on fate of collection). Some Drury material was acquired by Alexander Macleay and is now in Sydney (Horning, 1988). Many specimens were purchased by F. W. Hope and should still be in UMO (Hope *marginalia*). Hayek (1985) provided additional information on the fate of Drury specimens.

#### Fabricius, Johann Christian (1745-1808)

Gilbert (1977, 21 citations); Zimsen (1964, type material); Tuxen (1967a & b, biography & bibliography); Michelsen (1979a, muscoid spp.); Pape (1986, sarcophagid spp.); Evenhuis (1988, Labillardière material).

## Fallén, Carl Fredrik (1764–1830)

Gilbert [no data]; Ander (1952, collection notes); Persson 1964 (notes on types); Michelsen (1983, anthomyiid spp.); Pont (1984, muscid spp.); Pape 1986 (sarcophagid spp.).

## Forster, Johann Reinhold (1729-1798)

Gilbert (1977, 5 citations), Day & Fitton (1977, type material).

## Geoffroy, Etienne Louis (1727–1810)

Gilbert (1977: 135, 3 citations). His principal work (1762) was ruled as non-binominal by ICZN (1954). The Diptera genus-group names were subsequently validated by ICZN (1957), and his species are available from their appearance in Fourcroy (1785). His collections were stated to be deposited in "Mus. Autun" "via de Laplanche" (Horn & Kahle 1935: 88), but several inquiries to the Musée d'Histoire Naturelle, Autun, have remained unanswered.

## Gimmerthal, Benjamin August (1779–1848)

Gilbert (1977: 140, 1 citation). Types in Riga.

# Gravenhorst, Jean Louis Charles (1777-1857)

Gilbert (1977, 2 citations). His collection was deposited at Wroclaw, but the Diptera types are now lost among the general material or destroyed (M. Kak, *in litt*; also Kinel, 1957).

# Gmelin, Johann Friedrich (1748–1804)

Gilbert (1977: 141, 2 citations); Kabat & Petit (1988, editions of 1790); Spilman (1967, nomenclatural importance of 1790 work); Vane-Wright (1975, definitive treatment of 1790 work and collections). Insect types from the Leskean Museum have been identified in NMI, but none of the Diptera survive (J. P. O'Connor, *in litt.*, 28 Sept 90).

## Haliday, Alexander Henry (1807-1870)

Gilbert (1977: 156, 9 citations); Nash & Chandler (1978, general notes on material & types).

## Harris, Moses (1730-between 1787-1789)

Gilbert (1977: 160, 2 citations); Goffe (1946, 1951, syrphid names, notes on works); Lisney (1960, biographic and bibliographic notes); Weiss (1926, biography); Hagen (1861, bibliographic note); Pont & Michelsen (1982, muscoid names, general notes).

#### Harris, Thaddeus William (1795-1856)

Gilbert (1977, 21 citations); Johnson (1925, notes on collection); Wilkinson (1980, notes on papers). The Harris collection is now in MCZ, where it is kept as a separate collection along with Harris' notebooks.

### Linnaeus, Carl von (1707-1778)

Gilbert (1977: 227, 41 citations); Jackson (1890, history of collection); Bryk (1949, types in De Geer Collection); Lindroth (1957, work, collections); Day & Fitton (1978, re-curation of collection); Pont (1981, muscoid spp.); Thompson *et al.* (1982, syrphid spp.); Mikkola (1983, Linnaean insect pins); White (1987, tephritid spp.).

## Macquart, Justin Pierre Marie (1778-1855)

Gilbert (1977: 241, 6 citations); Macquart (1850, list of material in Lille); Brauer (1899, collection notes); Maa (1963, notes on labels); Pont (1967, Australian muscid spp.); Ackland & Taylor (1972, notes on types at Oxford); Crosskey (1971, collection, labels & type notes); Lopes (1975, type notes); Thompson (1989, collection, label & type notes).

## Meigen, Johann Wilhelm (1764-1845)

Gilbert (1977: 251, 11 citations); Steyskal (1974, translation of biographic materials); Herting (1972, tachinid types); Pont (1986b, extensive notes on Meigen's collection and collectors); Morge (1975-76, Meigen's color plates).

## Müller, Otto Friedrich (1730-1784)

Gilbert (1977: 268, 4 citations); Henriksen (1922, 1940; biographic & bibliographic notes); Anker (1950, on *Zoologia Danica*). According to Hagen (1844: 131; also Horn & Kahle, 1936: 184), the collection of Müller was destroyed when the English fleet under Admiral Nelson bombarded Copenhagen in 1801. However, Anker in her review of Müller makes no mention of this destruction, merely stating that "posthumous scientific belongings were scattered by being sold at a public auction" (Anker, 1950: 86).

## Panzer, Georg Wolfgang Franz (1755-1829)

Gilbert (1977: 287, 7 citations); Saunders (1888, index). Panzer's collection was given to ZMHU and the material was integrated into the general collection. We do not know of any modern worker who has been able to identify authentic Panzer type material in ZMHU. Some of the species illustrated in his *Favnae insectorvm germanicae* came from other collections and, hence, may be found in other places.

## Poda von Neuhaus, Nicolaus (1723-1798)

Gilbert (1977: 300, 1 citation); Schiner (1856, critical revision of Diptera species in 1763 work). Nothing is known of the collections of Poda. We wrote to the Steiermärkisches Landesmuseum, Graz, and were informed that despite extensive searches for Poda's collection no information about its existence had ever been discovered and the collection is assumed to have been destroyed (J. Madler *in litt.*, 9 July 92)

## Preyssler, Johann Daniel Edvard (17??-post 1838)

Gilbert [no data]. Rozkosny et al. (1982, notes on Diptera).

# Robineau-Desvoidy, André Jean Baptiste (1799-1857)

Gilbert (1977: 319, 7 citations); Royer (1931, notes on collection); Sabrosky (1974, defence of). What remains of the Robineau-Desvoidy collection is now at MNHNP, but most of it is known to have been destroyed. A check has been made in the remmants of his collection for the species enumerated in this paper, but nothing survives.

# Rondani, Camillo (1807-1879)

Gilbert (1977: 322, 16 citations); Guigla (1957, types in Genoa); Sabrosky (1961, bibliographic notes); Hennig (1961, muscid types); Pape (1988, notes on collection & sarcophagid types).

# Roser, Karl Ludwig Friedrich von (1787-1861)

Gilbert (1977: 324, 1 citation). Roser material is now in the museum at Ludwigsburg (SMN).

# Rossi, Pietro (1738?-1804)

Gilbert (1977: 324, 3 citations); Baccetti (1962, biographic & bibliographic notes). Horn and Kahle (1936: 231) stated that the Rossi collection passed to Frédéric de Sanvitale of Parma and part thereof (or all) later passed via J. Hellwig to ZMHU in Berlin. Baccetti (1962: 20), however, noted that no Rossi types have been found in Berlin.

# Schrank, Franz von Paula (1747-1835)

Gilbert (1977: 342, 2 citations). See Gistl, 1837b.

## Scopoli, Johann Anton (1723-1788)

Gilbert (1977: 344, 7 citations); Higgins (1963, fate of collection and notes on plates for 1763 work); Schiner (1856, critical revision of Diptera species in 1763 work); Voss (1881, detailed information on life and collections); Guglia (1972 in Scopoli 1972, biography).

### Thomson, Carl Gustaf (1824-1899)

Gilbert (1977: 381, 8 citations); Persson (1964, general notes on types; 1972, notes on "Eugenies Resa" material).

## Thunberg, Carl Peter (1743-1828)

Gilbert (1977: 382, 8 citations); Karsholt & Schmidt-Nielsen (1986, collection notes).

## Walker, Francis (1809-1874)

Gilbert (1977: 400, 14 citations); Smith & Taylor (1964, types at Oxford); Pont (1966, type notes); Lopes (1975, type notes); Graham (1979, biography); Walker (1984, material in Melbourne); Thompson (1989, collection, label & type notes).

## Wiedemann, Christian Rudolph Wilhelm (1770-1840)

Gilbert (1977: 414, 3 citations); Zimsen (1954, types in Copenhagen); Thompson (1989, collection, label & type notes).

# Zetterstedt, Johann Wilhelm (1785–1874)

Gilbert (1977: 425, 5 citations); Ander (1952, collection notes); Persson (1964, notes on types); Michelsen (1985, anthomyiid spp.); Pape (1986, sarcophagid spp.).

# Systematic Database of Musca Names

## Scope

All names proposed in combination with the genus-group name *Musca* or now included in the genus *Musca* are reviewed here. This definition is broad because fly maggots were described as ascarid worms and fossil cockroaches were mistaken for flies! So some names proposed in combination with *Ascaris* (Phylum Nematoda) now are to be found as synonyms of *Musca domestica* and some names proposed in combination with *Musca* are now found assigned to species in the order Blattodea. A few other names associated with these *Musca* names have been included. When a name was originally proposed in another genus but subsequently placed in *Musca* and

there renamed because of homonymy, the original name is included despite its current placement. For example, Gmelin (1790: 2865) transferred Rhagio maculatus Fabricius to Musca and renamed it as Musca adspersus because the Fabrician name was a junior secondary homonym of Musca maculata Scopoli (1763: 326). Rhagio maculatus is included so that information on its type-locality and type-depository is available. Likewise, data for all valid senior synonyms of names proposed in Musca are included. A number of subsequent usages, usually representing new combinations, are also included because they were listed in Sherborn's Index Animalium. In Sherborn, there is usually no indication of the status of included names. We have thus included all names listed for Musca in Sherborn and have identified their status. These subsequent usages of Musca names can be confusing to modern workers. For example, Schumann (1986: 18) and Kurahashi (1989: 703) treated Scopoli's misidentification of Musca carnaria Linnaeus (a sarcophagid, but Scopoli applied the name to a calliphorid) as an available name. Likewise, Hennig (1963: 857) rejected the name Musca laeta Fallén because Sherborn (1922: 3355) listed Musca laeta Turton but did not indicate that the Turton name was only a subsequent use of Syrphus laetus Fabricius.

Altogether, the database includes 2,077 names, of which 1,709 are available, 904 are valid, 305 are junior homonyms, and 368 are unavailable. A number of new names (3), new combinations (64) and new synonyms (57) are given.

#### **Format**

The general format of the entries in the alphabetical list is given below. Square brackets here denote information only included when relevant. Valid names are given in **BOLD** face type; available, but invalid names are given in *italics*; and unavailable names are in Roman.

name Author, publication year: page of indication and/or description (Original genus). Type locality or status of name. Kind of type Sex of type Depository of type. Family, current valid name including author to the extent known. [Comments and further information.]

Type locality data are given in full for all available names except replacement names and emendations. These data were taken from the original literature unless more detailed data were available from type specimens or from subsequent studies. Locality names have been corrected to conform to current usage and political boundaries where possible. When this is not possible, the original data are given in double quotes ("..."). For replacement names and emendations, the status of the name is given, such as "emend. [=emendation of] of *x-us* Author" or "n. n. [=new name for] *x-us* Author".

For nomina nuda, locality data are given, if known. For all other unavailable names, the status of the name is given, such as "incosp. [=incorrect original spelling of] x-us Author," or "missp. [=misspelling of] x-us Author." Data are also provided on the types of names or authentic material (of nomina nuda) where such are available. Two indexes are provided: One lists the names by biogeographical realm and the other by the current taxonomical position. The traditional division of the world into biotic regions is used and our definition of those regions conforms to the ones used by the various regional Diptera catalogs. The taxonomic index lists the names by family, genus, and species to which they currently belong. In both indexes, the index term is first, separated by a colon and followed by the list of the names that are associated with the term.

#### Cut-off date

All "Musca" names found in the literature before 1 January 1992 have been included in the database.

#### Lists of abbreviations used

For the status of a name, the following abbreviations are used:

N. n. = New name proposed for ...
Incosp. = Incorrect original spelling of ...
Missp. = [Subsequent] misspelling of ...
Emend. = Emendation of ...

For the kind of type specimen(s), the following abbreviations are used:

A = adult,  $\vec{\sigma} \circ = \text{male}(s) \text{ and female}(s),$   $\varphi = \text{female},$  L = larva,  $\vec{\sigma} = \text{male},$  X = fossil

For the kind of type, the following abbreviations are used:

HT = holotype, LT = lectotype, NT = neotype, ST = syntypes, and T = type, status unknown or typical specimen(s).

Holotype is used when one specimen was designated as the type or holotype or equivalent term in the original description or when the original description

was clearly based on a unique specimen (see Article 73a). Under the *International Code of Zoological Nomenclature*, a holotype can only be designated in the original description. However, many modern authors have retrospectively designated "holotypes," usually because only one specimen remains extant. When the original description does not indicate the number of specimens upon which the name was based and this can not be determined from the description itself, then these subsequent "holotype" designations are lectotype designations (Article 74b). For all published declarations of "holotypes" for names which did not have valid holotype designations, we have included the citation to the "holotype" designation.

Lectotype is used when one of the syntypes has been subsequently designated as the type in accordance with article 74 of the *International Code of Zoological Nomenclature*. A citation is given to the source of the designation.

*Neotype* is used when a new specimen, not previously a type, has been designated in accordance with article 75 of *International Code of Zoological Nomenclature*. A citation is given to the source of the designation.

*Syntypes* is used when the original description clearly applies to multiple specimens or multiple specimens were listed as examined AND when no lectotype has been designated.

*Type* is used when the status of the type specimens is unknown. "T" is also used in the sense of typical with *nomina nuda* to indicate the presence of voucher specimens associated with the unavailable name.

For the depositories of type specimens, museum acronyms as used by Griffiths for the *Flies of the Nearctic Region* series (1980) are given. These and the other abbreviations used are as follows.

AMNH American Museum of Natural History, New Yor	AMNH	American I	Museum	of Natural	History,	New	York
--	------	------------	--------	------------	----------	-----	------

AMS	Australian Museum, S	ydney
7 77170	rasaanan mascani, b	JULLO

ANSP	Academy of Natural Sciences, Philadelphia
ASI.	Academy of Sciences St Petershurg

Auction	Types sold at auction,	current location unknown.
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Author	Collection of the author of the name. See abo	ve under the
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section on workers for further information.

(Natural History)], London

BMNH B	Banks Collection, now deposited in BMNH
CAS	California Academy of Sciences, San Francisco

CNC Canadian National Collection, Biosystematics Research

Centre, Agriculture Canada, Ottawa

# Systematic Database of Musca Names

CRIK Central Research Institute, Kasauli, India (Awati's material

is probably lost)

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DEI Deutsches Entomologisches Institut, Eberswalde

DESTROY Type known to be destroyed. The source of this information

is either given in the comments for the entry or under the

author in the section on workers.

HIPHA High Institute of Public Health, Alexandria

IMZ Istituto e Museo di Zoologia, University of Turin, Italy IRSNB Institut Royal de Sciences Naturelles de Belgique, Brussels

ISS Instituto Superiore de Sanita, Rome

ITZA Instituut voor Taxonomische Zoölogie, Amsterdam

LMNR Latvian Museum of Nature, Riga

Lost Type not found in appropriate collection, presumed to be lost

LSL Linnaean Society, London

MCSNG Museo Civico di Storia Naturale, Genoa MCSNM Museo Civico di Storia Naturale, Milan

MCZ Museum of Comparative Zoology, Harvard University,

Cambridge

MHNL Musée d'Histoire Naturelle, Lille

Muséum National d'Histoire Naturelle, Paris MNHNP Musée Royal de l'Afrique Centrale, Tervuren **MRAC** MVM Museum of Victoria, Abbotsford, Melbourne National Collection of Insects, Pretoria NCIP NMI National Museum of Ireland, Dublin **NMP** Natal Museum, Pietermaritzburg Naturhistorisches Museum, Vienna NMW Naturhistoriska Riksmuseet, Stockholm NRS

NSMT National Science Museum, Tokyo QMB Queensland Museum, Brisbane

RNH Nationaal Natuurhistorisch Museum, Leiden (formerly

Rijksmuseum van Natuurlijke Historie)

SAIMR South African Institute of Medical Research, Johannesburg

SAMCT South African Museum, Cape Town

SIE Shanghai Institute of Entomology, Shanghai

SMF Senckenbergisches Museum für Naturkunde,

Frankfurt-am-Main

SMN Staatliches Museum für Naturkunde, Ludwigsburg

UMO University Museum, Oxford [see Smith (1986) for details]
Unknown Locality of type material unknown. More specific

information may be found under the author in the section on

workers.

USB Universita degli Studi di Bologna, Bologna

USNM National Museum of Natural History, Smithsonian Institution

[formerly United States National Museum], Washington

UZMC Universitetets Zoologiske Museum, Copenhagen UZMC F Fabrician Collection, now deposited at UZMC

Yeats Yeats Collections, remains in University Museum, Glasgow

ZIL Zoological Institute, University of Lund, Lund
ZIU Zoological Institute, University of Uppsala, Uppsala

ZMHU Institut für Spezielle Zoologie und Zoologisches Museum der

Humboldt Universität, Berlin

ZSI Zoological Survey of India, Calcutta

ZSZMH Zoologisches Staatsinstitut und Zoologisches Museum,

Hamburg

#### Status of Names

The treatment of names follows the 3rd edition of the International Code of Zoological Nomenclature (hereafter, simply the CODE). Today, the status of a name is usually clearly indicated by the author with an explicit statement, such as "new species," "new name," etc. However, in the early literature, the status of names is frequently not so clearly indicated. The problem of "new" names in such comprehensive works as those of Gmelin (1790) and Turton (1801) is an example (see below) of the difficulties involved in determining the true status of names. When there is no explicit statement of status, three factors must be considered to determine the status: 1) Name - Is the spelling of the name identical or not to another name? 2) Characterization - Is the characterization given the same or different from that of other taxa? and 3) Attribution - Is the name attributed to another source? Names that are the same and are associated with the "same" characterization are considered to be the same, the later one being a subsequent usage of the earlier one. If a name is attributed to another worker and is identical in spelling to a name of the other worker, then it is a subsequent usage of that name and is not available unless it appears before the attributed usage. Even if the author deliberately mis-applies the name, the name is not available and is only a subsequent mis-identification unless the mis-application is being used as the type-species of a new genus (Art. 11 h(i)). If a name is attributed to another worker but differs in spelling from the name of the other worker, then the name may be an emendation, replacement, or a misspelling. Emendations, replacement names, and misspellings are separated only by the intent of the worker. Such intent is not always clearly documented. For emendations, the CODE defines intent as citation of both an original spelling and an emended spelling with the use of the emended spelling (Art. 33b(i)). The example given in the CODE of treatment of names in a similar way is not precisely true. For a new name, the CODE also implies a deliberate statement of replacement. Thus, incorrect subsequent spellings are defined by exclusion, that is, anything which is not an emendation nor a replacement name is a subsequent incorrect spelling. Names that differ from prior ones in spelling and have no attribution are considered to be new proposals, especially if accompanied by a characterisation that is distinct. Our interpretation of names is summarized in the following table.

Some names in Gmelin (1790) and Turton (1801) present special problems. As noted above, names that differ from their original spelling may be considered as new names, emendations, or incorrect subsequent spellings. The first two possibilites are available names, but the last is not. A new name is a name expressly proposed as a replacement for an earlier name; an emendation is any demonstrably intentional change in the original spelling of a name; and incorrect subsequent spelling is anything else. The spellings used for some names in Gmelin and Turton are different from the original ones. The intent of Gmelin and Turton in making changes is not clear from their work. Gmelin gave references to the original spelling of all names, but did not give the original spelling nor an explanation for his deviation from it. Turton did not give the authority or the original source for names taken from Fabricius (1794) as he stated in his introduction that he followed "the last edition of the system of Fabricius" and that he omitted the numerous synonyms and references in Fabricius to reduce the bulk of his work. For names not in Fabricius, Turton did give a reference to the original source. In most cases, Turton did not give the original spelling and in no case did he give an explanation for his changes. The lack of an indication of intent would suggest that the changes in Gmelin and Turton should be considered simply as mistakes (incorrect subsequent spellings). And this is their proper status under the current CODE (ICZN, 1985, Art. 12(b)3 defines "indication" as "the proposal of a new replacement name (nomen novum) for an available name"). However, the requirement of an indication of intent for names published before 1930 was not part of earlier CODEs. In the prior edition, names published before 1930 need only be accompanied by an indication such as "the substitution of a new name for a previously established name" (ICZN 1964, Art. 16(a)(iii)). In Gmelin and Turton, it is clear that a new name (that is, one of a different spelling) has been substituted for an old name. Thus, while the purpose for the substitution (or lack of purpose, that is, an erroneous misspelling<sup>6</sup>), whether to replace or emend, was not implicitly stated, the result is indisputable. Most workers have accepted at least some of the substitutions as new replacement names. So, to reject all the substitu-

<sup>6</sup> We do recognize that some of the minor changes were probably unintentional mistakes. For example, a type setter may have easily mistaken *meditabunda* in Gmelin's handwriting as *meditalnenda* which is what was set in type, and Gmelin may have overlooked the mistake in the proof stage. However, the problem of retrospectively deciding what was a mistake and what was an intentional change still remains!

tions in these works as merely incorrect subsequent spellings as the current CODE requires would be to upset current usage. We therefore consider all changed names to be available (as was the case under previous CODEs), but have arbitrarily considered minor changes, such as *linzensis* Gmelin for *lincensis* Schrank, to be emendations and major changes, such as *australis* Gmelin for *testacea* Fabricius, to be new names. The essential point is not whether the name is an emendation or a replacement name, but that the name (= change) is available and, although synonymous, must be considered for the purposes of homonymy.

# Comparison table for determination of the status of names which are not clearly designated as new.

Class	Names	Characters	Attribution	Kind	Status
1		Same	Absent	Subsequent Usage	Unavailable
2	Same	Sa	Present	Sübsequeni Usage	Unavailable
3	Different		Present	Misidentification EXCEPT **	Unavailable
4		Diff	Absent	Homonym	Available
5		9	Absent	Synonym	Available
6	Different Same		Present	Emendation, Misspelling & Replacement name ***	Available/ Unavailable
7	Different	Absent	Valid Name	Available	
8		Present	Misidentification & Misspelling	Unavailable	
9			Present, but *	Synonym or Valid Name	Available

NAME: Same name means identical spelling except that for family group names where it should be taken to mean same type genus and the variant spellings deemed identical in art. 58.

CHARACTER is a set of attributes that differ among taxa. Same characters means objectively having the same type; subjectively belonging to the same taxon.

ATTRIBUTION means some indication of prior use of the name. Minimally this is merely the citation of an authority and maximally this is a full citation to a publication. \*Case 9 is the inclusion of earlier names (concepts) in a synonymy for a new proposal, etc. Depending on the status of the earlier names included, the new proposal may be a synonym or a valid name.

KIND: Names are either valid, homonyms, junior synonyms, emendations or the subsequent use of previously published names. Those subsequent usages can be either misspellings misapplications (misidentifications) or correct spellings and applications. \*\*Misidentifications are unavailable except when the misidentification is deliberately used for the type species of a new genus. \*\*\*Emendations, misspellings, and replacement names are separated only by the intent of the worker. Such intent is not always clearly documented. For emendation, the Code defines intent as "when in the work itself, or in an author's (or publisher's) corrigenda, the original and the changed spelling are cited and the latter is adopted in the place of the former ..." (art. 33(b)i). For replacement names, the Code requires that the original and the replacement name be given. Hence, misspellings (incorrect subsequent spellings) are only defined by exclusion, that is, anything which is not an emendation or a replacement name is a subsequent incorrect spelling.

STATUS: Names are either available or unavailable for scientific nomenclature. The problems of class 6 are discussed in the text.

# Alphabetical listing of Musca Names

abbreviata Gravenhorst, 1807: 380 (Musca). Unknown, probably Germany. T A Lost. Scathophagidae.

abdominalis Turton, 1801: 650 (Musca). Subsequent Usage of Syrphus abdominalis Fabricius, Syrphidae, Psarus coalescens Geoffroy.

abdominalis Fabricius, 1805: 294 (Musca). East Indies. HT Q UZMC. Calliphoridae, Thoracites abdominalis Fabricius. See Townsend 1931c: 372.

ablectus Harris, 1776: 41, pl. 10, fig. 2 (Musca). England. T A Unknown. Syrphidae. abrupta Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

accincta Wiedemann, 1830: 407 (Musca). Unknown. T & NMW. Calliphoridae, Phormia regina Meigen.

acromion Wiedemann, 1824: 47 (Musca). South America. T A UZMC. Tachinidae, Cholomyia acromion Wiedemann.

acuminata Gmelin, 1790: 2867 (Musca). Europe. T A NMI. Rhagionidae?

adiaphora Mayer, 1779: 184 (*Musca*). Czechoslovakia, Bohemia, Schuttenhofen Region. T A UNKNOWN.

adspersus Gmelin, 1790: 2865 (Musca). N. n. Rhagio maculatus Fabricius.

adumbrata Wiedemann, 1824: 48 (Musca). Java. T Q UZMC. Muscidae, Graphomya adumbrata Wiedemann.

adunata Geoffroy, 1785: 488 (Musca). France, Paris. T A Author. Syrphidae, Ceriana sp.

aenea Scopoli, 1763: 347 (Musca). Carniola. T A DESTROY. Syrphidae, Cheilosia sp.

aenea Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae. Preocc. Scopoli 1763.

aenea Fabricius, 1794: 335 (Musca). India. T A UZMC. Otitidae, Physiphora clausa Macquart. Preocc. Scopoli 1763. N. Comb.

aenea Zetterstedt, 1838: 656 (Musca). [Sweden, Lapland]. ST A NRS. Muscidae, Pyrellia rapax Harris. Preocc. Scopoli 1763.

aequinoctialis Linnaeus, 1758a: 598 (Musca). South America. T A NRS. Stratiomyidae.

aerea Fallén, 1825: 76 (Musca). Sweden, Skåne. LT & NRS. Muscidae, Spilogona aerea Fallén. Lectotype designated by Pont 1984: 279.

aestiua Müller, 1764: 86 (Musca). Denmark, Sjaelland, Frederiksdal. T A DE-STROY.

aestivationis Linnaeus, 1761: 454 (Musca). Sweden, Uppsala. T A LSL.

aestuans Linnaeus, 1758a: 600 (Musca). Europe. T A LSL.

aethiops Gmelin, 1790: 2831 (Musca). Subsequent Usage of Bibio aethiops Fabricius. Bombyliidae, Anthrax aethiops Fabricius.

aethiops Stein, 1913: 467 (*Musca*). Tanzania, Moschi and Kilimandjaro. ST A ZMHU. Muscidae, *Musca aethiops* Stein.

affinis Turton, 1801: 639 (Musca). Subsequent Usage of Syrphus affinis Fabricius. Tachinidae, Allophora hemiptera Fabricius.

affinis Lamarck, 1816: 363 (Musca). Subsequent Usage of Syrphus affinis Fabricius. Tachinidae, Allophora hemiptera Fabricius.

- affinis Fallén, 1817: 237 (Musca). Sweden, Skåne. LT & NRS. Sarcophagidae, Agria affinis Fallén. Lectotype designated by Pape 1986: 303. N. Status
  - Pape (1986: 303) used *punctata* Robineau-Desvoidy as he believed that *affinis* Fallén was preoccupied by "Musca affinis" Turton and "Musca affinis" Lamarck, both names being merely subsequent usage of Syrphus affinis Fabricius.
- affinis Meigen, 1838: 304 (Musca). Subsequent Usage of Calliphora affinis Macquart. Calliphoridae, Calliphora vomitoria Linnaeus.
- affixa Walker, 1856a: 27 (Musca). Malaysia, Mt. Ophir. T & BMNH. Muscidae, Morellia affixa Walker.
- afra Paterson, 1956: 160, fig. 3 (Musca). Tanzania, Torina. HT & SMN. Muscidae, Musca afra Paterson.
- africa Wiedemann, 1824: 49 (Musca). South Africa, Cape of Good Hope. T Q UZMC. Sarcophagidae.
- africana Bezzi, 1892: 190 (Synamphoneura). Somalia, Obbia. T♀ MCSNM. Muscidae, Musca lucidula Loew.
- agilis Harris, 1780: 86, pl. 25, fig. 19 (Musca). England. T A Unknown. Tachinidae. agilis Rossi, 1790: 311 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Preocc. Harris 1780.
- agilis Meigen, 1826: 70 (Musca). Germany. T A MNHNP. Calliphoridae, Bellardia vulgaris Robineau-Desvoidy. Preocc. Harris 1780. See Rognes 1991a: 44 about types. N. Comb.
- agilitas Harris, 1780: 108, pl. 32, fig. 45 (Musca). England. TA Unknown. Syrphidae, Platycheirus cyaneus Müller.
- agromyzina Fallén, 1825: 74 (Musca). Sweden, Skåne, near Äsperöd. LT ♀ NRS. Muscidae, Coenosia agromyzina Fallén. Lectotype designated by Pont 1984: 280.
- agrorum Gmelin, 1790: 2869 (Musca). Subsequent Usage of Syrphus agrorum Fabricius. Syrphidae, Palpada agrorum Fabricius.
- alata Gmelin, 1790: 2842 (Musca). Missp. elata Fabricius. Sciomyzidae, Tetanocera elata Fabricius.
- alba Malloch, 1929a: 265 (Byomya). Sudan, Khartoum. HT ♂ BMNH. Muscidae, Musca sorbens Wiedemann.
- albiceps Wiedemann, 1819a: 38 (Musca). South Africa, Cape of Good Hope. HT 9 NMW. Calliphoridae, Chrysomya albiceps Wiedemann. See Townsend 1931c: 374.
- albicincta Rossi, 1794: 69 (Musca). Italy. T A ZMHU. Scenopinidae, Scenopinus albicinctus Rossi.
- albicincta Fallén, 1825: 73 (Musca). Sweden, Skåne. LT ♂ NRS. Anthomyiidae, Calythea nigricans Robineau-Desvoidy. Preocc. Rossi 1794. Lectotype designated by Michelsen, 1983: 110.
- albifrons Linnaeus, 1761: 453 (*Musca*). Sweden. T A LSL. Tachinidae. 1 sp. in LSL (Dear MS).
- albimana Gmelin, 1790: 2876 (Musca). Subsequent Usage of Syrphus albimanus Fabricius. Syrphidae, Platycheirus cyaneus Müller.
- albina Wiedemann, 1830: 415 (Musca). East Indies. ST ♀ UZMC NMW. Muscidae, Musca albina Wiedemann.
- albipennis Meigen, 1826: 58 (Musca). Germany, probably Stolberg. HT ♀ MNHNP. Muscidae, Musca tempestiva Fallén. See Pont 1986b: 211.

albipes de Villers, 1789a: 426 (Musca). Subsequent Usage of Stratiomys albipes Geoffroy. Stratiomyidae, Nemotelus pantherinus Linnaeus. Synonymy from de Villers.

albiseta Scopoli, 1763: 341 (Musca). Carniola. T A DESTROY. Sciomyzidae, Ilione

albiseta Scopoli.

albolineata Fallén, 1823: 54 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Polietes domitor Harris. Lectotype designated by Pont 1984: 280.

albomaculata Macquart, 1843: 308 (Musca). Mauritius. HT & MNHNP. Muscidae, Musca xanthomelaena Wiedemann. See Pont & Matile, 1976: 743.

albomicans Schummel, 1832: 74 (Musca). Nomen nudum.

albula Fallén, 1825: 74 (Musca). Sweden, Västergötland. LT ♂ NRS. Anthomyiidae, Delia albula Fallén. Lectotype designated by Michelsen 1983: 110.

alceae Preyssler, 1791: 129, pl. 4, fig. 20 (Musca). Czechoslovakia, Bohemia. T A DESTROY. Otitidae, Physiphora alceae Preyssler. See Rozkosny, Chvála & Pont 1982: 353.

aldrichi Townsend, 1931d: 468 (Willistonia). Brazil. HT & NMW. Tachinidae, Belvosia aldrichi Townsend. As n. n. for "Musca esuriens BB. Ald. (nec Fab., nec Wied.)."

alevo Harris, 1780: index (Musca). Incosp. allevo Harris. Fanniidae, Fannia scalaris. Fabricius.

allevo Harris, 1780: 147, pl. 43, fig. 67 (Musca). England. T A Unknown. Fanniidae, Fannia scalaris Fabricius. Name improperly formed (verb).

allii Panzer, 1804: 72 (Musca). Germany, Regensburg. T A Unknown.

alni Scopoli, 1763: 332 (Musca). Carniola. T A DESTROY. Calliphoridae, Eurychaeta muscaria? Meigen.

alpesa Walker, 1849: 901 (Musca). Sierra Leone. HT & BMNH. Muscidae, Musca alpesa Walker. See Pont 1990: 163.

alterabilis Gmelin, 1790: 2843 (Musca). Europe. T A NMI.

alternata Schrank, 1781: 448 (Musca). Austria. T A Unknown. Syrphidae, Episyrphus cannabina Scopoli.

altratus Harris, 1780: index (Musca). Missp. atratus Harris. Tachinidae.

aluta Walker, 1849: 911 (Musca). Lapland? LT 9 BMNH. Muscidae, Myospila meditabunda Fabricius. Lectotype designated by Pont 1970b: 112.

ambigua Fallén, 1823: 56 (Musca). Sweden, Skåne, Äsperöd. LT & ZIL. Anthomyidae, Zaphne ambigua Fallén. Lectotype designated by Michelsen 1983: 110.

ambulans Müller, 1776: 177 (Musca). Denmark. T A DESTROY.

amentaria Scopoli, 1763: 335 (Musca). Carniola. NT & BMNH. Calliphoridae, Pollenia amentaria Scopoli. Neotype designated by Rognes 1991a: 218.

americana Fabricius, 1775: 774 (*Musca*). South America. HT A UZMC. Cuterebridae, *Cuterebra americana* Fabricius. See Townsend 1931a: 80.

americana Swederus, 1787: 288 (Musca). North America. T A BMNH B. Syrphidae, Eristalis barda Say. Preocc. Fabricius 1775.

amica Linnaeus, 1771: 17 (*Musca*). Sweden, Ryby. T A UNKNOWN. Tephritidae. [Linnaeus 1785: 91].

amica Krastin, 1950: 549 (Musca). Nomen nudum. Muscidae, Musca amita Hennig. amica Zimin, 1951: 145, fig. 126 (Musca). Mongolia & USSR, Siberia. ST & ASL. Muscidae, Musca amita Hennig. Preocc. Linnaeus 1771.

- amicula Harris, 1780: 158, pl. 47, fig. 7 (*Musca*). England. TA Unknown. Dolichopodidae.
- amita Hennig, 1964: 986 (Musca). N. n. Musca amica Zimin. Muscidae, Musca amita Hennig.
- amoena Harris, 1835: 599 (Musca). Nomen nudum. Massachusetts. T A MCZ. Muscidae, Neomyia cornicina Fabricius. Published without diagnosis or indication.
- analis Macquart, 1843: 311, pl. 21, fig. 2 (Musca). Chile. HT & MNHNP. Muscidae, Musca domestica Linnaeus. See Pont 1967: 182.
- anceps Fabricius, 1805: 296 (Musca). South America. HT A UZMC. Tachinidae, Trichodura anceps Fabricius. See Townsend 1931a: 95.
- angelicae Scopoli, 1763: 329 (Musca). Carniola. TA DESTROY. Muscidae, Phaonia angelicae Scopoli.
- angusticornis Ratzeburg, 1844: 173 (Musca). Germany. T A Unknown. Tachinidae, Baumhaueria goniaeformis Meigen.
- angustifrons Thomson, 1868: 546 (Musca). Marianas, Ponape. LT & NRS. Muscidae, Musca vetustissima Walker. Lectotype designated by Pont 1977a: 128.
- anilis Linnaeus, 1761: 442 (Musca). Sweden, Skåne. T A LSL. Therevidae, Dialineura anilis Linnaeus. 3 sp. in LSL (Dear MS).
- annexa Müller, 1776: 173 (Musca). Denmark. T A Author. Syrphidae, Neoascia annexa Müller. See Thompson 1981b: 472.
- annonae Fabricius, 1794: 358 (Musca). West Indies. TA UZMC F. Otitidae, Euxesta annonae Fabricius.
- annulata Schrank, 1781: 477 (Musca). Austria, Vienna. T A Unknown. Preocc. Harris 1776.
- annulata Geoffroy, 1785: 492 (Musca). France, Paris. T A Author. Preocc. Harris 1776.
- annulata Fabricius, 1787: 348 (Musca). Cayenne. T A UZMC F. Micropezidae, Taeniaptera meigenii Perty. Preocc. Harris 1776.
- annulata de Villers, 1789a: 418 (Musca). Subsequent Usage of Nemotelus annulatus De Geer. Rhagionidae, Rhagio annulatus De Geer.
- annulatus Harris, 1776: 40, pl. 10, fig. 4 (Musca). England. T A Unknown. Syrphidae, Volucella inanis Linnaeus.
- anteaimbulo Harris, 1776: 60, pl. 15, fig. 17 (Musca). England. T A Unknown. Syrphidae, Xanthogramma festiva Linnaeus.
- anteambulo Harris, 1776: 60 (Musca). Incosp. anteiambulo Harris. Syrphidae, Xanthogramma festiva Linnaeus. Name revised by Goffe 1946: 75. Name improperly formed (verb).
- anthracina Meigen, 1838: 301 (Musca). Germany & Belgium, Liège. LT 9 MNHNP. Calliphoridae, Melinda viridicyanea Robineau-Desvoidy. Lectotype designated by Rognes 1991a: 203.
- anthrax Schrank, 1781: 439 (Musca). Austria, Vienna, Prater. T A Unknown. Bombyliidae, Anthrax anthrax Schrank.
- antiquissima Walker, 1849: 901 (Musca). Australia. HT & BMNH. Muscidae, Musca domestica Linnaeus. See Pont 1973: 169 & 1990: 163.
- aphidioides Scopoli, 1763: 349 (Musca). Carniola. T A DESTROY.
- aphidivora Geoffroy, 1785: 481 (Musca). France, Paris. T A Author. Syrphidae.

apiaria Gmelin, 1790: 2867 (Musca). Subsequent Usage of Syrphus apiarius Fabricius. Muscidae, Mesembrina mystacea Linnaeus.

apiformis De Geer, 1776: 128, pl. 7, fig. 18 (Musca). Sweden. T A NRS. Syrphidae, Microdon apiformis De Geer.

apiformis Schrank, 1781: 459 (Musca). Austria, Vienna. T A Unknown. Syrphidae, Pocota personata Harris. Preocc. De Geer 1776.

apiformis Geoffroy, 1785: 488 (Musca). Sweden. T A LSL. Syrphidae, Eristalis tenax Linnaeus. Preocc. De Geer 1776.

apivora De Geer, 1776: 56, pl. 3, fig. 4 (Musca). Sweden. T A NRS. Syrphidae, Volucella inanis Linnaeus.

aquatica Geoffroy, 1785: 478 (Musca). France, Paris. T A Author. Otitidae, Dorycera aquatica Geoffroy. N. Comb.

aratoria Fabricius, 1794: 344 (Musca). Barbaria. T A MNHNP. Sciomyzidae, Ilione albiseta Scopoli.

arbustorum Linnaeus, 1758a: 591 (Musca). Sweden. T A LSL. Syrphidae, Eristalis arbustorum Linnaeus. See Thompson et al. 1982: 151.

arctii De Geer, 1776: 42, pl. 2, fig. 6 (Musca). N. n. Musca solstitialis Linnaeus. Tephritidae, Urophora solstitialis Linnaeus.

arcuata Linnaeus, 1758a: 592 (Musca). Sweden. LT & LSL. Syrphidae, Chrysotoxum arcuatum Linnaeus. Lectotype designated by Thompson et al. 1982: 152.

arcuata Fabricius, 1781: 451 (Musca). Germany, Kiel. T A UZMC F. Tephritidae, Xyphosia miliaria Schrank. Preocc. Linnaeus 1758.

arcuata Panzer, 1798c: 15 (Musca). Austria. T ♀ ZMHU. Syrphidae, Brachyopa maculipennis Thompson. Preocc. Linnaeus 1758.

ardea Turton, 1801: 633 (Musca). Subsequent Usage of Rhagio ardea Fabricius. Therevidae, Cliorismia ardea Fabricius.

argentata Gmelin, 1790: 2843 (Musca). Europe. T A NMI.

argentea Manuel, 1811: 19 (Musca). Emend. argentata Gmelin.

argyrostoma Schrank, 1781: 460 (Musca). Austria, Vienna. T A Unknown. Tachinidae, Servillia ursina? Meigen.

aricioides Walker, 1864: 216 (Musca). Aru Islands. HT & BMNH. Muscidae, Myiophaea spissa Walker. See Pont 1966: 88.

aristata Panzer, 1801: 24 (Musca). Germany. T A ZMHU. Psilidae, Loxocera ichneumonea Linnaeus.

armipes Fallén, 1825: 75 (Musca). Sweden, Skåne. LT & ZIL. Muscidae, Hydrotaea armipes Fallén. Lectotype designated by Pont 1984: 281.

arnicae Linnaeus, 1758a: 600 (Musca). Europe. LT A Lost. Tephritisa enricae Linnaeus. Lectotype designated by White 1987: 101.

arrogans Linnaeus, 1761: 457 (Musca). Sweden. T A LSL. Empididae, Tachydromia arrogans Linnaeus. 1 sp. in LSL (Dear MS).

artemisiae Fabricius, 1794: 351 (Musca). Denmark. T A UZMC. Tephritidae, Trypeta artemisiae Fabricius.

aruorum Fabricius, 1787: 335 (Syrphus). China. T A UZMC. Syrphidae, Eristalinus arvorum Fabricius.

arvorum Gmelin, 1790: 2869 (Musca). Subsequent Usage of Syrphus arvorum Fabricius. Syrphidae, Eristalinus arvorum Fabricius.

ascarides Scudder, 1877: 756 (Musca). Colorado, White River [Oligocene]. T X USNM. Oestridae, Hypoderma ascarides Scudder.

- aselliformis Geoffroy, 1785: 475 (Musca). France, Paris. T A Author.
- asiatica Shinonaga & Kano, 1977: 111, fig. 2 (Musca). Thailand, Khao Yai. HT & NSMT. Muscidae, Musca asiatica Shinonaga & Kano.
- asiliformis Gmelin, 1790: 2871 (Musca). Subsequent Usage of Syrphus asiliformis Fabricius. Syrphidae, Leucozona lucorum Linnaeus.
- asiliformis Preyssler, 1791: 99, pl. 3, fig. 13 (*Musca*). Czechoslovakia, Prague, Stromovke Park. T A DESTROY. Rhagionidae, *Chrysopilus asiliformis* Preyssler. Unrecognized See Rozkosny, Chvála & Pont 1982: 353.
- assimilis Fallén, 1823: 56 (Musca). South Sweden. LT Q ZIL. Muscidae, Muscina levida Harris. Lectotype designated by Pont 1984: 281.
- ater Harris, 1776: 58, pl. 15, fig. 11 (Musca). England. T A Unknown. Syrphidae, Eristalinus sepulchralis Linnaeus.
- aterrima de Villers, 1789a: 548 (*Musca*). Europe. T A Author. Tachinidae, *Leucostoma aterrima* de Villers. See Townsend 1932: 33 (HT in MNHNP).
- aterrima Fabricius, 1794: 334 (Musca). France. T A MNHNP. Phoridae, Phora atra Meigen. Preocc. de Villers 1789. N. Comb.
- atherix Donovan, 1813: 23 (Musca). N. n. Atherix maculatus Meigen. Athericidae, Atherix ibis Fabricius.
- atra Meuschen, 1787: 212 (Musca). Unknown. T A Auction. Preocc. Harris 1776.
- atra de Villers, 1789a: 551 (Musca). Europe. T A Author. Rhinophoridae. Preocc. Harris 1776.
- atra Fallén, 1823: 59 (Musca). Sweden, Skåne. HT Q ZIL. Muscidae, Thricops longipes Zetterstedt. Preocc. Harris 1776. See Pont 1984: 281.
- atramentaria Meigen, 1826: 65 (Musca). Austria. T A NMW. Calliphoridae, Pollenia atramentaria Meigen.
- atrata Fabricius, 1794: 333 (Musca). Germany. T A UZMC F. Piophilidae, Piophila casei Linnaeus. Preocc. Harris 1776.
- atratula Ratzeburg, 1844: 170 (*Musca*). Germany. T A Unknown. Chamaemyiidae, *Leucopis atratula* Ratzeburg.
- atratus Harris, 1776: 37, pl. 9, fig. 7 (Musca). England. T A Unknown. Tachinidae. atricolor Fallén, 1825: 82 (Musca). Sweden, Skåne. LT & NRS. Muscidae, Helina atricolor Fallén. Lectotype designated by Pont 1984: 281.
- atrifrons Wiedemann, 1830: 403 (Musca). Unknown. T ? NMW. Tachinidae, Tromodesiopsis atrifrons Wiedemann. See Aldrich 1929: 4; Townsend 1931a: 96.
- atrifrons Bigot, 1887: clxxiii (Musca). Cuba. LT 

  BMNH. Muscidae, Musca domestica Linnaeus. Preocc. Wiedemann 1830. Lectotype designated by Pont 1990: 164.
- atropos Schrank, 1776: 94 (Musca). Austria, Linz & Vienna. T A Unknown. Syrphidae, Myathropa florea Linnaeus.
- aucta Walker, 1853b: 334 (Musca). Madras or Calcutta. T ♀ BMNH. Calliphoridae, Calliphora vicina Robineau-Desvoidy. Preocc. Harris 1780.
- auctus Harris, 1780: 126, pl. 36, fig. 57 (Musca). England. T A Unknown. Anthomyidae, Pegomya sp.
- audaculus Harris, 1780: 121, pl. 35, fig. 41 (Musca). England. T A Unknown. Anthomyiidae, Paregle audacula Harris.
- augur Fabricius, 1775: 777 (Musca). Australia. T A BMNH B. Calliphoridae, Calliphora augur Fabricius.

aurata Linnaeus, 1764a: 309 (Musca). Nomen nudum. [France]. Published in non-binominal work.

aurata Müller, 1764: 86 (*Musca*). Denmark, Sjaelland, Frederiksdal. T A Author. *aurata* Fabricius, 1787: 347 (*Musca*). Germany, Kiel. T A UZMC F. Stratiomyidae, *Chloromyia formosa* Scopoli. Preocc. Müller 1764.

aurifacies Robineau-Desvoidy, 1830: 396 (Musca). France, Paris. T & DESTROY.

Muscidae, Musca domestica Linnaeus.

auriflua Wiedemann, 1830: 364 (Musca). [Brazil] Included under Musca tessellata Fabricius. HT A ZMHU. Sarcophagidae, Oxysarcodexia aurifinis Walker. Published in synonymy, not subsequently validated by usage. See Townsend (1931a: 74) for HT designation.

aurifrons de Villers, 1789a: 549, pl. 10, fig. 10 (Musca). Occitania [=France, Languedoc]. T A Author. Tachinidae, Ectophasia crassipennis Fabricius.

aurulans Robineau-Desvoidy, 1830: 397 (Musca). Brazil & Cayenne. T ♂ DE-STROY. Muscidae, Musca domestica Linnaeus.

aurulans Walker, 1849: 893 (Musca). Subsequent Usage of Calliphora aurulans Robineau-Desvoidy. Calliphoridae, Cynomya cadaverina Robineau-Desvoidy.

australia Sherborn, 1922: 607 (Musca). Missp. australia Macquart. Muscidae, Musca domestica Linnaeus.

australis Gmelin, 1790: 2833 (Musca). N. n. Stratiomys testacea Fabricius. Xylophagidae, Coenomyia ferruginea Scopoli.

australis Robineau-Desvoidy, 1830: 394 (Sphora). Australia, W. A., "Baie des Chiens-Marins." T & DESTROY. Muscidae, Musca domestica Linnaeus.

australis Boisduval, 1835: 669 (Musca). Australia, Port King George. T A MNHNP. Calliphoridae, Calliphora albifrontalis Malloch. Preocc. Gmelin 1790.

australis Macquart, 1843: 309, pl. 20, fig. 10 (Musca). Tasmania, Hobart. LT & MNHNP. Muscidae, Musca domestica Linnaeus. Preocc. Gmelin 1790. Lectotype designated by Pont 1967: 187.

ausus Harris, 1780: 85, pl. 25, fig. 16 (Musca). England. T A Unknown. Tachinidae. autumnalis De Geer, 1776: 83 (Musca). Sweden. LT & NRS. Muscidae, Musca autumnalis De Geer. Lectotype designated by Persson, Pont & Michelsen 1984: 92.

avarus Harris, 1780: 152, pl. 45, fig. 80 (Musca). England. TA Unknown. Heleomyzidae.

avenae Bjerkander, 1781: 172 (Musca). Sweden. T A UNKNOWN. Chloropidae, Oscinella frit Linnaeus.

azurea Fallén, 1817: 245 (*Musca*). Sweden, Västergötland. LT A NRS. Calliphoridae, *Protocalliphora azurea* Fallén. Lectotype designated by ICZN 1990: 235.

azurea Walker, 1849: 880 (*Musca*). Subsequent Usage of *Lucilia azurea* Robineau-Desvoidy. Calliphoridae, *Lucilia caesar* Linnaeus.

azurea Doleschall, 1859: 111 (Musca). Amboina. T A Lost. Calliphoridae, Lucilia papuensis Macquart. Preocc. Fallén 1817. Types not found in NMW or ZMHU (Pont).

bakeri Patton, 1923a: 316 (Musca). Philippines. ST & ♀ USNM. Muscidae, Musca bakeri Patton. See Pont 1990: 164; syntypes also in BMNH & MCSNM.

balteata De Geer, 1776: 116 (Musca). Sweden. T A NRS. Syrphidae, Episyrphus cannabina Scopoli.

- bardus Harris, 1780: 106, pl. 32, fig. 39 (Musca). England. T A Unknown. Syrphidae, Cheilosia bardus Harris.
- basalis Walker, 1853b: 347 (Musca). Jamaica. T & BMNH. Muscidae, Morellia basalis Walker.
- basilaris Macquart, 1843: 310 (Musca). Brazil. T ♀ MNHNP. Muscidae, Musca domestica Linnaeus.
- bata Walker, 1849: 875 (Musca). Unknown. T A BMNH. Calliphoridae, Chrysomya megacephala Fabricius.
- beckeri Schnabl, 1911: 325 (Plaxemyia). Israel, Haifa. HT ♀ Lost? Muscidae, Musca albina Wiedemann. Type either in PAN (Schnabl collection, destroyed 1945) or ZMHU.
- benedicta Walker, 1858b: 105 (Musca). Aru Islands. LT & BMNH. Muscidae, Neomyia timorensis Robineau-Desvoidy. Lectotype designated by Pont 1966: 89.
- bezzii Patton & Cragg, 1913a: 19, pl. 4 (*Musca*). India, Kodaikanal & Kotagiri. ST & Lost. Muscidae, *Musca bezzii* Patton & Cragg. Types lost, not now in BMNH (Pont 1990: 164).
- bibosa Scudder, 1877: 757 (Musca). Colorado, White River [Oligocene]. T X USNM.
- bibula Wiedemann, 1830: 672 (Musca). Nomen nudum. A UNKNOWN. Calliphoridae, Chrysomya albiceps Wiedemann.
- bicincta Linnaeus, 1758a: 592 (Musca). Sweden. LT & LSL. Syrphidae, Chrysotoxum bicinctum Linnaeus. Lectotype designated by Thompson et al. 1982: 152.
- bicinctata Turton, 1801: 644 (Musca). N. n. Musca bicincta Linnaeus. Syrphidae, Chrysotoxum bicinctum Linnaeus.
- bicolor de Villers, 1789a: 511 (Musca). N. n. Musca putris Geoffroy. T A Author. bicolor Fabricius, 1798: 564 (Musca). France. T A MNHNP. Preocc. de Villers 1789.
- bicolor Fabricius, 1805: 291 (Musca). South America. HT Q UZMC. Calliphoridae,
   Mesembrinella bicolor Fabricius. Preocc. de Villers 1789. See Townsend 1931a:
   69.
- bicolor Fallén, 1825: 91 (Musca). Subsequent Usage of Anthomyia bicolor Wiedemann. Anthomyiidae, Pegomya bicolor Wiedemann.
- bicolor Meigen, 1838: 308 (*Musca*). Subsequent Usage of *Pollenia bicolor* Macquart. Calliphoridae, *Pollenia bicolor* Macquart.
- bicolor Walker, 1853b: 339 (Musca). Unknown. T & BMNH. Calliphoridae, Phormia regina Meigen. Preocc. de Villers 1789. N. Syn.
- bicolora Sulzer, 1776: xxv (*Musca*). Nomen nudum. Switzerland. T A UNKNOWN. Bombyliidae, *Hemipenthes morio* Linnaeus. Published without diagnosis or indication. Synonymy by Fuesslin (1778: 165).
- bidentata de Villers, 1789a: 429, pl. 9, fig. 14 (*Musca*). Southern France, Nemausum [? = Nemours]. T A Author. Bibionidae, *Bibio* sp.
- bifasciata Fabricius, 1775: 777 (*Musca*). West Indies, Virgin Islands. HT A UZMC F. Tachinidae, *Belvosia bifasciata* Fabricius. See Townsend 1931b: 176.
- bifasciata Schrank, 1776: 95, pl. 3, fig. 21 (Musca). Austria, Linz. T A Unknown. Syrphidae, Neoascia annexa Müller. Preoce. Fabricius 1775. See Thompson 1981b: 472.
- bigemmis Walker, 1853b: 341 (Musca). Cape. T & BMNH. Calliphoridae, Chrysomya chloropyga Wiedemann.
- bilineata de Villers, 1789a: 550 (Musca). Europe. T A Author.

bilineata Gmelin, 1790: 2830 (Musca). Subsequent Usage of Bibio bilineata Fabricius. Therevidae, Anabarynchus bilineatus Fabricius.

bilineata Gmelin, 1790: 2866 (Musca). N. n. Rhagio punctatus Fabricius. Anisopodidae, Sylvicola punctatus Fabricius. Preocc. de Villers 1789.

bimaculata Swederus, 1787: 290 (*Musca*). Australia. T A Lost. Type(s) not now in BMNH B (Pont).

bipuncta Wiedemann, 1830: 417 (Musca). Brazil. LT ♀ NMW. Muscidae, Morellia bipuncta Wiedemann. Lectotype designated by Pont in Pamplona (1986: 50).

bipunctata Scopoli, 1763: 341 (Musca). Carniola. T A DESTROY. Stratiomyidae, Sargus bipunctatus Scopoli.

bipunctata Müller, 1776: 174 (Musca). France, Paris. T A Author. Syrphidae, Chrysotoxum arcuatum Linnaeus. Preocc. Scopoli 1763.

biseta Hough, 1898: 173 (Musca). Somalia, Sheikh Husein. LT & ANSP. Muscidae, Musca biseta Hough. Lectotype designated by Pont 1976: 269.

bivittata Doleschall, 1859: 111 (Musca). Amboina. T A DESTROY. Calliphoridae, Euphumosia bivittata Doleschall.

bivittata Thomson, 1868: 547 (Musca). Philippines, Luzon, Manila. T ♂ NRS. Muscidae, Musca sorbens Wiedemann. Preocc. Doleschall 1859.

blandus Harris, 1780: 106, pl. 32, fig. 38 (Musca). England. T A Unknown. Syrphidae, Syrphus ribesii Linnaeus.

boganidae Erichson, 1851: 67 (Musca). USSR, W. Taymyr, River Boganida. T A UNKNOWN. Calliphoridae, Protophormia atriceps Zetterstedt.

bohemica Preyssler, 1793: 203 (*Musca*). Czechoslovakia, Roupov in Plzen District. T A DESTROY. Tachinidae. See Rozkosny, Chvála & Pont 1982: 353.

bombinatrix Schrank, 1837: 17 (Musca). N. n. Syrphus apiarius Fabricius. Muscidae, Mesembrina mystacea Linnaeus.

bombylans Linnaeus, 1758a: 591 (Musca). Sweden. LT \( \text{LSL}. \) Syrphidae, Volucella bombylans Linnaeus. Lectotype designated by Thompson et al. 1982: 152.

bombyliformis Geoffroy, 1785: 479 (Musca). France, Paris. T A Author. Syrphidae, Merodon equestris Fabricius.

bombylina Retzius, 1783: 181 (Musca). Emend. bombylius De Geer. Muscidae, Mesembrina mystacea Linnaeus.

bombylius De Geer, 1776: 133, pl. 8, fig. 1-3 (Musca). N. n. Musca mystacea Linnaeus. Muscidae, Mesembrina mystacea Linnaeus.

bombyloides Sulzer, 1776: 216 (Musca). Switzerland, Zürich. T & Unknown. Muscidae, Mesembrina mystacea Linnaeus.

borealis Zetterstedt, 1837: 42 (*Musca*). *Nomen nudum*. [Sweden, Lapland]. T A ZIL. Muscidae, *Muscina levida* Harris.

borealis Zetterstedt, 1838: 660 (Musca). Sweden, Lapland. T A ZIL. Muscidae, Muscina levida Harris.

bovina Robineau-Desvoidy, 1830: 398 (Musca). France. T A DESTROY. Muscidae, Musca autumnalis De Geer.

brachyptera Panzer, 1798c: 16 (Musca). Germany, Nuremberg. T A ZMHU. Tachinidae, Phasia crassipennis Fabricius.

braesia Walker, 1849: 891 (Musca). South Africa. T & BMNH. Muscidae, Neomyia peronii Robineau-Desvoidy.

brassicaria Fabricius, 1775: 778 (Musca). Europe. T A UZMC F. Tachinidae, Cylindromyia brassicaria Fabricius.

brevis Rossi, 1790: 306 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Tachinidae, Leucostoma aterrima de Villers.

brunnea Thunberg, 1789: 89 (Musca). N. n. Syrphus inanis Fabricius. Syrphidae, Copestylum brunneum Thunberg.

brunnea Gmelin, 1790: 2859 (Musca). Europe. T A NMI. Preocc. Thunberg 1789. buccata Scopoli, 1763: 342 (Musca). Carniola. T A DESTROY.

buccata Fallén, 1824: 65 (Musca). Sweden, Skåne. LT 

NRS. Anthomyiidae, Leucophora sericea Robineau-Desvoidy. Preocc. Scopoli 1763. Lectotype designated by Michelsen 1983: 111.

buphthalmi Linnaeus, 1762: 471 (Musca). Palestine. T A LSL. Suppressed by I.C.Z.N. 1914: 31.

cadaverina Linnaeus, 1758a: 595 (Musca). Sweden. LT & LSL. Calliphoridae, Lucilia caesar Linnaeus. Lectotype designated by Pont 1981: 167.

cadaverum Kirby, 1837: 316 (Musca). "North America, lat. 65". T A Unknown. Calliphoridae.

caemeteriorum Turton, 1801: 648 (Musca). Emend. cemiteriorum Linnaeus. Syrphidae, Chrysogaster cemiteriorum Linnaeus.

caerulea Meigen, 1826: 63 (Musca). Germany. LT & MNHNP. Calliphoridae, Melinda gentilis Robineau-Desvoidy. Preocc. Wiedemann 1819. Lectotype designated by Rognes 1991a: 205.

caerulea Brullé, 1832: 315 (Musca). Greece, Morea. T Q UNKNOWN. Calliphoridae, Lucilia sp. Preocc. Wiedemann 1819.

caeruleophthalmica Scopoli, 1763: 331 (Musca). Carniola. T A DESTROY. Lauxaniidae, Sapromyza sp.

caerulescens de Villers, 1789a: 464 (Musca). Bressia [= Bresse, France]. T A Author. Stratiomyidae, Sargus iridatus Scopoli.

caerulescens Meigen, 1826: 55 (Musca). Austria. T P NMW. Calliphoridae, Lucilia sericata Meigen. Preocc. de Villers 1789.

caerulescens Meigen, 1838: 307 (Musca). Subsequent Usage of Pollenia caerulescens Macquart. Calliphoridae, Pollenia rudis Fabricius.

caesar Linnaeus, 1758a: 595 (Musca). Europe. T A LSL. Calliphoridae, Lucilia caesar Linnaeus. 3 sp. in LSL (Dear MS).

caesarina Scopoli, 1763: 327 (Musca). Carniola. T A DESTROY. Calliphoridae, Lucilia sp.

caesarion Scharfenberg, 1805: 999 (*Musca*). Germany. T A Unknown. Calliphoridae, *Lucilia* sp. Accredited to Hellwig in the index (p. 1041).

caesarion Meigen, 1826: 57 (Musca). Portugal. HT & NMW. Muscidae, Neomyia cornicina Fabricius. Preocc. Scharfenberg 1805. See Pont 1986b: 215.

caesia Rossi, 1790: 310 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Stratiomyidae, Microchrysa polita Linnaeus.

caesia Meigen, 1826: 76 (Musca). Austria. HT Q NMW. Muscidae, Muscina prolapsa Harris. Preocc. Rossi 1790. See Pont 1986b: 216.

caesio Harris, 1780: 75, pl. 21, fig. 8 (Musca). England. T A Unknown. Tephritidae, Myoleja caesio Harris.

calamitosa Bjerkander, 1777: 32 (Musca). Sweden. T A UNKNOWN. Chloropidae. calcarata Turton, 1801: 648 (Musca). Subsequent Usage of Syrphus calcaratus Fabricius. Syrphidae, Merodon calcarata Fabricius.

calcitrans Harris, 1780: 141 (Musca). Subsequent Usage of Conops calcitrans Linnaeus. Muscidae, Stomoxys calcitrans Linnaeus.

calisia Walker, 1849: 912 (Musca). South Africa. T ? DESTROY. Muscidae, Morellia calisia Walker. [teste Pont].

calleva Walker, 1849: 905 (Musca). South Africa. HT & BMNH. Muscidae, Musca calleva Walker. See Pont 1990: 164.

calliphoroides Walker, 1861b: 245 (Musca). New Guinea, Dorey. ST & BMNH. Calliphoridae, Euphumosia papua Guérin-Méneville. ST also in UMO (teste Pont).

callosus Harris, 1776: 61, pl. 15, fig. 18 (Musca). England. T A Unknown. Syrphidae, Chrysotoxum bicinctum Linnaeus.

campestris Robineau-Desvoidy, 1830: 395 (Musca). France, Saint-Sauveur? T & DESTROY. Muscidae, Musca autumnalis De Geer.

campicola Robineau-Desvoidy, 1863: 627 (Musca). France, Nice. T A DESTROY. Muscidae, Musca domestica Linnaeus.

canicularis Linnaeus, 1761: 454 (Musca). N. n. Musca lateralis Linnaeus. Fanniidae, Fannia canicularis Linnaeus. Conserved by I.C.Z.N. 1969:124.

canicularis Houttuyn, 1768: 506 (Musca). Subsequent Usage of Musca canicularis Linnaeus. Fanniidae, Fannia canicularis Linnaeus.

canina Fabricius, 1781: 440 (Musca). England. T A BMNH B. Tachinidae, Dexiosoma caninum Fabricius.

cannabina Scopoli, 1763: 344 (*Musca*). Carniola. T A DESTROY. Syrphidae, *Episyrphus cannabina* Scopoli.

canus Harris, 1780: 114, pl. 33, fig. 28 (*Musca*). England. TA Unknown. Tachinidae. capensis Meuschen, 1787: 212 (*Musca*). *Nomen nudum*. Unknown. TA Auction. Bombyliidae? Published without diagnosis or indication.

capensis Zielke, 1971b: 214 (Musca). South Africa, S. W. Cape, N of Van Rhynsdorp. HT & NMP. Muscidae, Musca capensis Zielke.

capitata De Geer, 1776: 23, pl. 1, fig. 300 (Musca). Sweden. T A NRS. Tachinidae, Gonia capitata De Geer.

capito Lichtenstein, 1796: 216 (Musca). Sinai. T A Auction.

capraria Linnaeus, 1758: 598 (Musca). Incosp. cuprarius Linnaeus. Stratiomyidae, Sargus cuprarius Linnaeus.

capucina Gmelin, 1790: 2831 (Musca). Subsequent Usage of Bibio capucina Fabricius. Bombyliidae, Exoprosopa capucina Fabricius.

caracteristica Geoffroy, 1785: 494 (Musca). France, Paris. T A Author.

carbonaria Panzer, 1798a: 15 (Musca). Austria. T A ZMHU. Tachinidae, Periscepsia carbonaria Panzer. "HT in Berlin?, not seen" (Townsend 1932: 34).

cardui Linnaeus, 1758a: 600 (Musca). France. LT A Lost. Tephritidae, Urophora cardui Linnaeus. Lectotype designated by White 1987: 102.

cardui Geoffroy, 1785: 471 (Musca). Subsequent Usage of Musca cardui Linnaeus. Tephritidae, Urophora cardui Linnaeus.

carinata Meuschen, 1787: 212 (Musca). Unknown. T A Auction.

carinifrons Fallén, 1817: 243 (Musca). Sweden, Skåne. HT A NRS. Tachinidae, Dinera carinifrons Fallén. See Townsend 1932: 37.

carnaria Linnaeus, 1758a: 596 (Musca). Europe & America. LT & LSL. Sarcophagidae, Sarcophaga carnaria Linnaeus. Lectotype designated by Richet 1986: 132.

- carnaria, Scopoli, 1763: 325 (Musca). Misid. carnaria Linnaeus. Calliphoridae, Calliphora vomitoria Linnaeus.
- carnarida Stephens, 1829a: 60 (Musca). Nomen nudum. England. T 9 BMNH. Calliphoridae, Protocalliphora rognesi Thompson & Pont. Published without diagnosis or indication.
- carnifex, Robineau-Desvoidy, 1830: 393 (Byomya). France, Saint-Sauveur. T & DESTROY. Muscidae, Musca tempestiva Fallén.
- carnifex Macquart, 1834: 158 (Musca). Subsequent Usage of Byomya carnifex Robineau-Desvoidy. Muscidae, Musca tempestiva Fallén.
- carnivora Fabricius, 1794: 313 (Musca). Germany. HT A UZMC F. Calliphoridae, Calliphora vicina Robineau-Desvoidy. Suppressed by I.C.Z.N. 1992: 90. See Rognes 1991a: 68.
- caruca Walker, 1849: 877 (Musca). Chile. T & BMNH. Calliphoridae, Compsomyiops fulvicrura Robineau-Desvoidy.
- casei Linnaeus, 1758a: 597 (Musca). Europe. T A LSL. Piophilidae, Piophila casei Linnaeus.
- cassara Pont, 1973: 160, fig. 47 (Musca). Solomon Islands, Guadalcanal, Kukum. HT & BMNH. Muscidae, Musca cassara Pont. See Pont 1990: 164.
- castanea Meuschen, 1787: 212 (Musca). Unknown. T A Auction.
- caudata Geoffroy, 1785: 480 (Musca). France, Paris. T A Author.
- caudex Harris, 1780: 158, pl. 47, fig. 6 (Musca). England. T A Unknown. Dolichopodidae.
- cautus Harris, 1776: 60, pl. 15, fig. 15 (Musca). England. T & Unknown. Syrphidae, Chrysotoxum cautum Harris.
- cellaris Linnaeus, 1758a: 597 (Musca). Europe. T A LSL. Drosophilidae, Drosophila funebris? Fabricius. Type(s) lost (Bächli 1990: 845).
- cellaris Bloch, 1776: 173 (Musca). Subsequent Usage of Musca cellaris Linnaeus. Drosophilidae, Drosophila funebris? Fabricius.
- cellaris Geoffroy, 1785: 499 (Musca). Subsequent Usage of Musca cellaris Linnaeus. Drosophilidae, Drosophila funebris? Fabricius.
- celsus Harris, 1780: 125, pl. 36, fig. 53 (Musca). England. T & Unknown. Muscidae, Helina celsa Harris.
- cemiteriorum Linnaeus, 1758a: 597 (Musca). Sweden. LT & LSL. Syrphidae, Chrysogaster cemiteriorum Linnaeus. Lectotype designated by Thompson et al. 1982: 152.
- centaureae Fabricius, 1794: 360 (Musca). Germany, Kiel. T A UZMC F. Tephritidae, Euleia heraclii Linnaeus.
- cephalotes Bosc, 1792: 55 (Musca). France, Paris. T A MNHNP. Pipunculidae, Pipunculus campestris? Meigen.
- cerasi Linnaeus, 1758a: 600 (Musca). France. LT A Lost. Tephritidae, Rhagoletis cerasi Linnaeus. Lectotype designated by White 1987: 102.
- cerasi Thunberg, 1789: 91 (Musca). T A UNKNOWN. Preocc. Linnaeus 1758.
- cerasina Harris, 1833: 594 (*Musca*). *Nomen nudum*. Massachusetts. T A MCZ. Tachinidae. Published without diagnosis or indication. A Say manuscript name.
- cerinus Harris, 1776: 36, pl. 9, fig. 6 (Musca). England. T A Unknown. Tachinidae, Gymnosoma rotundatum Linnaeus.
- certima Walker, 1849: 873 (Musca). Florida. HT Q BMNH. Calliphoridae, Cochliomyia macellaria Fabricius. [teste Pont].

chaerophylli Fabricius, 1798: 565 (*Musca*). Europe. T A UZMC F. Sciomyzidae, *Euthycera chaerophylli* Fabricius.

chalybaea Gravenhorst, 1807: 378 (*Musca*). Unknown, probably Germany. TA Lost. Calliphoridae.

chalybata Forster, 1770: 15 (Musca). Nomen nudum. England. Stratiomyidae, Beris chalybata Forster. Published without diagnosis or indication.

chalybata Forster, 1771: 95 (Musca). England. T A LSL. Stratiomyidae, Beris chalybata Forster.

chalybea Turton, 1801: 632 (Musca). N. n. Musca chalybata Forster. Stratiomyidae, Beris chalybata Forster.

chalybea Wiedemann, 1830: 402 (Musca). Java. T A RNH. Muscidae, Neomyia gavisa Walker. Preocc. Turton 1801.

chalybeata Gmelin, 1790: 2837 (Musca). Missp. chalybata Forster. Stratiomyidae, Beris chalybata Forster.

chamaeleon Linnaeus, 1758a: 589 (Musca). Europe. T A LSL. Stratiomyidae, Stratiomys chamaeleon Linnaeus. 4 sp. in LSL (Dear MS).

chilensis Walker, 1836: 354 (Musca). Chile. HT & BMNH. Calliphoridae, Neta chilensis Walker. See Dear 1979:150.

chilensis Macquart, 1843: 311, pl. 20, fig. 6 (Musca). Chile. ST & MNHNP. Muscidae, Musca domestica Linnaeus. Preocc. Walker 1836.

chloris Haliday, 1833: 165 (Musca). Ireland, Down, Holywood. T A NMI. Muscidae, Neomyia cornicina Fabricius.

chloropyga Wiedemann, 1818: 44 (*Musca*). South Africa, Cape of Good Hope. T A UZMC. Calliphoridae, *Chrysomya chloropyga* Wiedemann.

chorea Fabricius, 1781: 444 (*Musca*). Germany. T A UZMC F. Lonchaeidae, *Lonchaea chorea* Fabricius.

chrysocephala De Geer, 1776: 60 (Musca). N. n. Musca mortuorum Linnaeus. Calliphoridae, Cynomya mortuorum Linnaeus.

chrysocephala Gmelin, 1790: 2860 (Musca). Europe. T A NMI. Preocc. De Geer 1776.

chrysoides Walker, 1856a: 23 (Musca). Malaysia, Mt. Ophir. T & BMNH. Calliphoridae, Isomyia chrysoides Walker.

chrysoptera Schrank, 1803: 126 (Musca). Germany, Bavaria. T A Unknown. Lauxaniidae, Lauxania cylindricornis Fabricius.

chrysopus Gmelin, 1790: 2865 (Musca). N. n. Rhagio flavipes Fabricius. Athericidae, Atherix flavipes Fabricius.

chrysorrhaea Scopoli, 1763: 347 (Musca). Upper Carniola. T A DESTROY. Syrphidae.

chrysorrhoea Meigen, 1826: 60 (Musca). [Austria] Neotype from Aachen, Germany. NT & MNHNP. Calliphoridae, Protocalliphora rognesi Thompson & Pont. Preocc. Scopoli 1763. Neotype designated by Peus 1960: 209.

chrysostoma Lichtenstein, 1796: 216 (*Musca*). Osaureum [? = Ouche, France]. T A Auction.

chrysostoma Stephens, 1829b: 303 (Musca). Britain. Tachinidae, Dexiosoma caninum Fabricius. Published in synonymy, not subsequently validated by usage. Published in synonymy with Dexia canina Fabricius.

chrysotelus Walker, 1853b: 346 (Musca). South Africa. T & BMNH. Muscidae, Pyrellina marsya Walker.

- chrysozonias Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Chrysotoxum fasciatum Müller.
- chui Fan, 1965: 124 (Musca). China, Kwangtung, Nada. HT & SIE. Muscidae, Musca planiceps Wiedemann.
- cibaria Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Micropezidae, Compsobata cibaria Linnaeus. 1 sp. in LSL (Dear MS).
- cicur Harris, 1776: 47, pl. 11, fig. 88 (Musca). England. TA Unknown. Stratiomyidae, Chloromyia formosa Scopoli.
- ciliata Müller, 1776: 174 (Musca). Denmark. T A DESTROY. Dolichopodidae, Poecilobothrus nobilitatus Linnaeus.
- ciliata de Villers, 1789a: 428, pl. 9, fig. 13 (Musca). France, Nemausum [?= Nemours]. T A Author. Bibionidae, Dilophus sp. Preocc. Müller 1776.
- ciliata Fabricius, 1794: 333 (Musca). Germany. HT & UZMC F. Muscidae, Hydrotaea diabolus Harris. Preocc. Müller 1776. See Michelsen 1979a: 182.
- cimecoides Fabricius, 1779: 253 (Musca). Norway. T A UZMC F. Empididae, Trachydromia arrogans Linnaeus.
- cimicoides Fabricius, 1781: 447 (Musca). Missp. cimecoides Fabricius. Empididae, Trachydromia arrogans Linnaeus.
- cincta Müller, 1766: 198 (Musca). Italy, Piedmont, Torino. T A IMZ. Tachinidae, Mintho praeceps Scopoli.
- cincta Drury, 1773: 109 (Musca). Jamaica. T A Author. Syrphidae, Meromacrüs pinguis Fabricius. Preocc. Müller 1766.
- cincta de Villers, 1789a: 419 (Musca). Subsequent Usage of Nemotelus cinctus De Geer. Xylophagidae, Xylophagus cinctus De Geer.
- cincta Fabricius, 1794: 347 (Musca). Denmark. T A UZMC. Sciomyzidae, Coremacera fabricii Rozkosny. Preocc. Müller 1766.
- cinctus Harris, 1776: 43, pl. 10, fig. 6 (Musca). England. T & Unknown. Syrphidae, Eristalis lineata Harris. Preocc. Müller 1766.
- cinctus Fabricius, 1787: 333 (Rhagio). Germany, Kiel. T A UZMC F. Anisopodidae, Sylvicola cinctus Fabricius.
- cineraria Rossi, 1794: 72 (Musca). Italy. T A ZMHU.
- cinerascens Geoffroy, 1785: 493 (Musca). France, Paris. T A Author.
- cinerascens Wiedemann, 1817: 79 (Musca). Germany, Holstein. T A UNKNOWN. Muscidae, Muscina stabulans Fallén. Preocc. Geoffroy 1785.
- cinerea Linnaeus, 1764a: 301 (Musca). Nomen nudum. [Sweden]. Tephritidae, Tephritis hyoscyami Linnaeus. Published in non-binominal work.
- cinerea de Villers, 1789a: 510 (Musca). Europe. T A Unknown. Preocc. Harris 1780. cinerea Fabricius, 1794: 331 (Musca). India Orientali. HT & UZMC. Sarcophagidae, Leucomyia alba Schiner. Preocc. Harris 1780. See Pape 1986: 302. N. Syn.
- cinerea Fallén, 1824: 70 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Botanophila silvatica Robineau-Desvoidy. Preocc. Harris 1780. Lectotype designated by Michelsen 1983:111.
- cinerea von Roser, 1840: 58 (Musca). Germany, Württemberg. T A SMN. Calliphoridae, Pollenia sp. Preocc. de Villers 1780.
- cinerella Fallén, 1825: 77 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Adia cinerella Fallén. Lectotype designated by Michelsen 1983: 111.
- cinereus Harris, 1780: 75, pl. 21, fig. 11 (Musca). England. T A Unknown. Tephritidae, Paroxyna punctella Fallén.

cinerius Harris, 1780: 74 (*Musca*). Incosp. *cinereus* Harris. Tephritidae, *Paroxyna punctella* Fallén. Name status by present revision.

cingalaisina Bigot, 1888: 606 (Musca). Sri Lanka. HT ♀ BMNH. Muscidae, Musca planiceps Wiedemann. See Pont 1990: 164.

cingulata Geoffroy, 1785: 477 (Musca). France, Paris. T A Author.

cingulata Fabricius, 1805: 301 (Musca). West Indies. HT & UZMC. Tachinidae, Calocarcelia fasciata Townsend. Preocc. Geoffroy 1785. See Townsend 1931b: 174. N. Comb.

cingulata Donovan, 1808: 67, pl. 465 (Musca). England, Surrey, Nutfield. T & UNKNOWN. Rhagionidae, Chrysopilus cristatus Fabricius. Preocc. Geoffroy 1785.

cingulatus Fabricius, 1775: 767 (Syrphus). New Zealand. T A BMNH B. Syrphidae, Helophilus cingulatus Fabricius.

citreofasciata Retzius, 1783: 179 (Musca). Missp. citrofasciata De Geer. Syrphidae, Xanthogramma festiva Linnaeus.

citrofasciata De Geer, 1776: 118 (Musca). N. n. Musca festiva Linnaeus. Syrphidae, Xanthogramma festiva Linnaeus.

clandestina Rossi, 1790: 314 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU.
clauata Fabricius, 1787: 351 (Musca). Germany, Kiel. T A UZMC F. Preocc. Drury 1773.

clauda de Villers, 1789a: 463 (*Musca*). Bressia [= Bresse, France]. T A Author. Syrphidae, *Merodon* sp.

clauipes Fabricius, 1781: 427 (Syrphus). Italy. T A UZMC F. Syrphidae, Merodon clavipes Fabricius.

clavata Drury, 1773: 103 (Musca). North America, New York. T A Author. Mydidae, Mydas clavatus Drury.

clavicornis Forster, 1770: 15 (Musca). Nomen nudum. England.

clavicrus Schrank, 1781: 471 (Musca). Austria, Vienna, Prater. T A Unknown. Chloropidae, Meromyza saltatrix Linnaeus.

claviformis Geoffroy, 1785: 476 (Musca). France, Paris. T A Author.

clavipes Linnaeus, 1767: 981 (Musca). Europe. T A LSL. Stratiomyidae, Beris clavipes Linnaeus. 2 sp. in LSL (Dear MS).

claviventris Gmelin, 1790: 2843 (Musca). Europe. T A NMI.

clemens Harris, 1780: 154, pl. 45, fig. 87 (Musca). England. TA Unknown. Fanniidae, Fannia lustrator Harris.

cloacaris Fabricius, Otto, 1780: 204 (*Musca*). Greenland, Umarsoroluk. T A UZMC. Scathophagidae.

cluvia Walker, 1849: 885 (Musca). West Indies. T Q BMNH. Calliphoridae, Lucilia cluvia Walker.

coalescens Geoffroy, 1785: 486 (Musca). France, Paris. T A Author. Syrphidae, Psarus coalescens Geoffroy.

coarctata Fallén, 1825: 84 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Delia coarctata Fallén. Lectotype designated by Michelsen 1983: 111.

coccinea de Villers, 1789a: 426 (Musca). Subsequent Usage of Stratiomyia coccinea Geoffroy. Stratiomyidae, Clitellaria ephippium Fabricius.

coeo Harris, 1780: 143, pl. 42, fig. 51 (Musca). England. T & Unknown. Muscidae, Pyrellia rapax Harris. Name improperly formed (verb).

- coerulata Sherborn, 1922: 958 (Musca). Missp. coerulea Wiedemann. Muscidae, Neomyia sp.
- coerulea De Geer, 1776: 57 (Musca, as carnaria coerulea). Nomen nudum. [Sweden]. Calliphoridae, Calliphora vomitoria Linnaeus. Not available; polynominal, not binominal.
- coerulea Wiedemann, 1819a: 23 (Musca). Java. T P DESTROY. Muscidae, Neomyia sp. See Pont 1973: 198.
- cognata Meigen, 1830: 374 (Musca). N. n. Musca caerulea Meigen. Calliphoridae, Melinda gentilis Robineau-Desvoidy. N. Syn.
- coleoptrata Scopoli, 1763: 338 (*Musca*). Carniola. T A DESTROY. Drosophilidae, *Stegana coleoptrata* Scopoli.
- collecta Walker, 1859b: 139 (Musca). Sulawesi, Makassar. T ♂ BMNH. Calliphoridae, Rhyncomya setipyga? Villeneuve.
- colombaschensis de Villers, 1789a: 555 (Musca). Subsequent Usage of Oestrus columbacensis Scopoli. Simuliidae, Simulium sp.
- colossus Scopoli, 1763: 327 (Musca). Carniola. T A DESTROY. Sarcophagidae, Sarcophaga carnaria? Linnaeus.
- combinata Linnaeus, 1767: 997 (Musca). Sweden. T A LSL. Opomyzidae, Geomyza combinata Linnaeus. 1 sp. in LSL (Dear MS).
- combrea Walker, 1849: 876 (Musca). Unknown. T A BMNH. Calliphoridae, Chrysomya megacephala Fabricius.
- comio Harris, 1780: 153, pl. 45, fig. 86 (*Musca*). Incosp. *comis* Harris. Anthomyiidae. comis Harris, 1780: index (*Musca*). England. T A Unknown. Anthomyiidae.
- comito Harris, 1780: 117, pl. 34, fig. 25 (*Musca*). England. T A Unknown. Scathophagidae, *Scathophaga lutaria* Fabricius. Name improperly formed (verb).
- commoror Harris, 1780: 117, pl. 34, fig. 22 (Musca). England. T A Unknown. Acalyptrate.
- comoror Harris, 1780: 74 (*Musca*). Incosp. *commoror* Harris. Acalyptrate. Name status by present revision.
- compressa Fabricius, 1787: 346 (Musca). Spain. T A UZMC F. Tachinidae, Mintho compressa Fabricius.
- compressa Fabricius, 1794: 337 (Musca). Cayenne. T A MNHNP. Tachinidae, Cordyligaster petiolata Turton. Preocc. Fabricius 1787. N. Comb.
- compressa Walker, 1849: 893 (Musca). Subsequent Usage of Calliphora compressa Robineau-Desvoidy. Calliphoridae, Cynomya cadaverina Robineau-Desvoidy.
- compunctor Sherborn, 1902: 235 (Musca). Missp. compunctus Harris. Muscidae, Graphomya maculata Scopoli.
- compunctus Harris, 1780: 113, pl. 33, fig. 24 (Musca). England. T & Unknown. Muscidae, Graphomya maculata Scopoli.
- comtus Harris, 1780: 108, pl. 32, fig. 47 (Musca). England. T A Unknown. Syrphidae, Xanthandrus comtus Harris.
- concinna Panzer, 1804: 195 (Musca). Germany, Regensburg. T A Unknown.
- concinna Wiedemann, 1825: , pl. 21 (Musca). "In insula Mezzo Dalmatiae". T A DEI. Calliphoridae, Rhyncomya impavida Rossi. Type(s) originally in collection of E. F. Germar.
- concolor Walker, 1853b: 333 (Musca). South America. T & DESTROY. Muscidae, Helina concolor Walker. [teste Pont].

conducens Walker, 1859b: 138 (Musca). Sulawesi, Makassar. HT & BMNH. Muscidae, Musca conducens Walker. See Pont 1990: 164.

conferta Geoffroy, 1785: 474 (Musca). France, Paris. T A Author.

confinis Fallén, 1825: 80 (Musca, as subpuncta var. β). Sweden. LT & NRS. Muscidae, Helina confinis Fallén. Lectotype designated by Pont 1984: 282.

confiscata Speiser, 1924: 104 (Musca). N. n. Musca fasciata Stein. Muscidae, Musca confiscata Speiser.

confixa Walker, 1856a: 26 (Musca). Mt. Ophir. T & BMNH. Calliphoridae, Isomyia confixa Walker.

conflagrans Walker, 1861c: 261 (Musca). Sulawesi, Menado. T & BMNH. Calliphoridae, Isomyia delectans Walker.

confluo Harris, 1780: 143, pl. 42, fig. 50 (*Musca*). England. T A Unknown. Tachinidae. Name improperly formed (verb).

conformis Fallén, 1825: 82 (Musca). Sweden, Skåne. LT  $\,^{\circ}$  NRS. Anthomyiidae, Pegomya conformis Fallén. Lectotype designated by Michelsen 1979b: 257.

confusus Harris, 1780: 110, pl. 33, fig. 51 (Musca). England. T A Unknown. Syrphidae, Platycheirus granditarsus Forster.

congolensis Villeneuve, 1916: 513 (Musca). Zaire. HT & MRAC. Muscidae, Musca alpesa Walker.

conica Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

conica Panzer, 1798c: 20 (Musca). Austria. T & ZMHU. Syrphidae, Brachyopa panzeri Goffe. Preocc. Gmelin 1790.

conica Fallén, 1825: 83 (*Musca*). Subsequent Usage of *Anthomyia conica* Wiedemann. Anthomyiidae, *Hydrophoria lancifer* Harris.

connexa Fabricius, 1794: 350 (Musca). France. T A MNHNP. Tephritidae, Euphranta connexa Fabricius.

connexa Walker, 1853b: 342 (Musca). Unknown. T & BMNH. Muscidae, Neomyia cornicina Fabricius. Preocc. Fabricius 1794.

conopsea Gmelin, 1790: 2868 (Musca). Subsequent Usage of Musca conopsoides Linnaeus sensu Fabricius. Syrphidae, Doros profuges Harris.

conopsoides Linnaeus, 1758a: 590 (Musca). Europe. LT & LSL. Syrphidae, Ceriana conopsoides Linnaeus. Lectotype designated by Thompson et al. 1982: 153.

conosoma Jördens, 1802: 30, pl. 7, fig. 9 (Ascaris). Germany, Jena. TL UNKNOWN. Muscidae, Musca domestica? Linnaeus.

consanguinea Rondani, 1848: 78 (Musca). Brazil. T A USB. Muscidae, Musca domestica Linnaeus.

consimilis Fallén, 1825: 85 (Musca). Sweden, Bohuslän. LT & ZIL. Muscidae, Helina consimilis Fallén. Lectotype designated by Pont 1984: 282.

consisto Harris, 1780: 112, pl. 33, fig. 56 (Musca). England. T A Unknown. Syrphidae, Dasysyrphus pinastri De Geer. Name improperly formed (verb).

consobrinus Curtis, 1835: 549, pl. 549 (Musca). England, Putney. T & MVM. Calliphoridae.

conspersus Harris, 1776: 38, pl. 9, fig. 11 (Musca). England. T Q Unknown. Tachinidae, Trixa conspersa Harris.

conssencis Harris, 1780: 123, pl. 36, fig. 47 (Musca). England. T A Unknown. Sepsidae, Themira putris Linnaeus.

constane Harris, 1780; index (Musca). Incosp. constans Harris. Muscidae, Hydrotaea meteorica Linnaeus.

- constans Harris, 1780: 149, pl. 43, fig. 75 (Musca). England. T Q Unknown. Muscidae, Hydrotaea meteorica Linnaeus.
- contigua Fabricius, 1794: 347 (Musca). Brazil. T A UZMC.
- contigua Walker, 1853b: 344 (Musca). United States. HT ? BMNH. Muscidae, Musca domestica Linnaeus. Preocc. Fabricius 1794. See Pont 1990: 164.
- continua Panzer, 1798c: 19 (Musca). Austria. T A ZMHU. Tachinidae, Clytiomyia continua Panzer.
- continua Robineau-Desvoidy, 1863: 628 (Musca). France, Nice. T A DESTROY. Muscidae, Musca autumnalis De Geer. Preocc. Panzer 1798.
- contracta Geoffroy, 1785: 491 (Musca). Sweden. T A LSL. Syrphidae, Xylota segnis Linnaeus.
- convenio Harris, 1780: 143, pl. 42, fig. 52 (Musca). England. T A Unknown. Tachinidae. Name improperly formed (verb).
- convexifrons Thomson, 1868: 547 (Musca). Hong Kong. HT & NRS. Muscidae, Musca convexifrons Thomson.
- convolo Harris, 1780: 143, pl. 42, fig. 49 (Musca). England. T A Unknown. Tachinidae.
- corni Scopoli, 1763: 328 (*Musca*). Carniola. T A DESTROY. Muscidae, *Mydaea corni* Scopoli.
- cornicena Fabricius, 1794: 317 (Musca). Missp. cornicina Fabricius. Muscidae, Neomyia cornicina Fabricius.
- cornicina Fabricius, 1781: 438 (*Musca*). Italy. HT A UZMC F. Muscidae, *Neomyia cornicina* Fabricius. See Michelsen 1979a; 183.
- cornuta Scopoli, 1772: 123 (Musca). Idrija. T A Unknown. Tephritidae, Vidalia cornuta Scopoli.
- cornuta Fabricius, 1794: 357 (Musca). Germany. T A UZMC F. Tephritidae, Terellia ceratocera Hendel. Preocc. Scopoli 1772.
- cornuta Fabricius, 1805: 298 (Musca). Denmark, Sjaelland. HT & UZMC. Muscidae, Helina setiventris Ringdahl. Preocc. Scopoli 1772. See Michelsen 1979a: 183.
- corollae Turton, 1801: 650 (Musca). Subsequent Usage of Syrphus corollae Fabricius. Syrphidae, Metasyrphus corollae Fabricius.
- corrigiolata Linnaeus, 1767: 995 (Musca). S. Europe. T A LSL. Micropezidae, Micropeza corrigiolata Linnaeus.
- coruina Fabricius, 1781: 440 (Musca). N. n. Musca autumnalis De Geer. Muscidae, Musca autumnalis De Geer. See Michelsen 1979a: 184.
- corvina Fabricius, 1794: 320 (Musca). Missp. coruina Fabricius. Muscidae, Musca autumnalis De Geer.
- corvinoides Schnabl & Dziedzicki, 1911: 180 (*Musca*). *Nomen nudum*. Muscidae, *Musca larvipara* Portschinsky. Published in synonymy, not subsequently validated by usage.
- coryden Harris, 1782: index (Musca). Missp. corydon Harris. Syrphidae, Cheilosia corydon Harris.
- corydon Harris, 1780: 106, pl. 32, fig. 36 (Musca). England. T A Unknown. Syrphidae, Cheilosia corydon Harris.
- coryleti Scopoli, 1763: 336 (Musca). Carniola. T A DESTROY. Sciomyzidae, Pherbina coryleti Scopoli.
- coryletti Sherborn, 1902: 251 (Musca). Missp. coryleti Scopoli. Sciomyzidae, Pherbina coryleti Scopoli.

coryli Rossi, 1794: 72, pl. 3, fig. 1 (Musca). Italy. T A ZMHU. Tephritidae, Aciura coryli Rossi.

cossenico Harris, 1780: 74 (Musca). Incosp. conssencis Harris. Sepsidae, Themira putris Linnaeus. Name status by present revision.

costalis Fabricius, 1794: 360 (Musca). West Indies. T A UZMC F. Otitidae, Euxesta costalis Fabricius.

costalis Walker, 1853a: 344 (Musca). South America. T & BMNH. Tachinidae, Myiopharus sp. Preocc. Fabricius 1794.

costalis Walker, 1860: 159 (Musca). Moluccas, Amboina. HT & BMNH. Calliphoridae, Stilbomyella gloriosa Walker. Preocc. Fabricius 1794. See Crosskey 1965: 95.

costata Linnaeus, 1767: 226 (Musca). Europe. T A UNKNOWN.

costata Panzer, 1800: 23 (Musca). Germany. T A ZMHU. Tachinidae, Gymnosoma intermedium Loew. Preocc. Linnaeus 1767.

cothurnata Panzer, 1798a: 20 (Musca). Austria. T & ZMHU. Micropezidae, Compsobata cibaria Linnaeus.

crabroniformis de Villers, 1789a: 428 (Musca). France, Cevennes. T A Author. Syrphidae, Milesia crabroniformis de Villers.

craggi Patton, 1922: 75 (Musca). India, Kerala, Nilambur District. ST A BMNH. Muscidae, Musca craggi Patton. See Pont 1990: 164.

crassa Gmelin, 1790: 2867 (Musca). Subsequent Usage of Syrphus crassus Fabricius. Syrphidae, Phytomia crassa Fabricius.

crassa Wiedemann, 1830: 387 (Musca). Brazil. HT & ZMHU. Tachinidae, Chaetotheresia crassa Wiedemann. See Townsend 1931a: 102.

crassicornis Fabricius, 1794: 328 (Musca). West Indies. T A UZMC F. Tachinidae, Gonia crassicornis Fabricius.

crassipennis Fabricius, 1794: 357 (Musca). Germany. T A UZMC F. Otitidae, Melieria crassipennis Fabricius.

crassipennis Lamarck, 1816: 363 (Musca). Subsequent Usage of Syrphus crassipennis Fabricius. Tachinidae, Ectophasia crassipennis Fabricius.

crassipes Schrank, 1781: 450 (Musca). Austria, Linz. T A Unknown. Syrphidae, Merodon crassipes Schrank.

crassipes Gmelin, 1790: 2860 (Musca). Europe. T A NMI. Preocc. Schrank 1781. crassirostris Stein, 1903: 99 (Musca). Egypt, Luxor, Cairo & Assuan. ST 3 2

ZMHU. Muscidae, Musca crassirostris Stein.

crassiseta Ratzeburg, 1844: 174 (Musca). Germany. T A Unknown. Tachinidae, Masicera sphingivora Robineau-Desvoidy.

crax Turton, 1801: 621 (Musca). N. n. Musca crux Fabricius. Tephritidae, Euphranta crux Fabricius.

cribrata de Villers, 1789a: 547, pl. 10, fig. 7 (Musca). Bressia [= Bresse, France]. T A Author. Sciomyzidae, Coremacera marginata Fabricius. N. Syn.

cristata Fabricius, 1775: 782 (Musca). England. T A UZMC F. Rhagionidae, Chrysopilus cristatus Fabricius.

cristata Fabricius, 1794: 339 (Musca). Barbaria. T A MNHNP. Anthomyiidae? Preocc. Fabricius 1775. Type figured by Coquebert (1804: 109).

crocus Harris, 1780: 118, pl. 34, fig. 27 (Musca). England. T A Unknown. Sciomyzidae, Ilione albiseta Scopoli.

cruciata Geoffroy, 1785: 499 (Musca). France, Paris. T A Author.

- crucis Gmelin, 1790: 2834 (Musca). Subsequent Usage of Stratiomys crucis Fabricius. Xylophagidae, Coenomyia ferruginea Scopoli.
- cruentata Geoffroy, 1785: 487 (Musca). France, Paris. T A Author. Syrphidae, Paragus cruentatus Geoffroy.
- crux Fabricius, 1794: 358 (*Musca*). India Orientali. T A UZMC. Tephritidae, *Euphranta crux* Fabricius.
- cryptarum Turton, 1801: 640 (Musca). Subsequent Usage of Syrphus cryptarum Fabricius. Syrphidae, Eristalis cryptarum Fabricius.
- cucularia Linnaeus, 1767: 995 (Musca). Sweden. T A LSL. Sciomyzidae, Elgiva cucularia Linnaeus. 1 sp. in LSL (Dear MS).
- cupraria Linnaeus, 1758a: 598 (Musca). Europe. T A LSL. Stratiomyidae, Sargus cuprarius Linnaeus. 3 sp. in LSL (Dear MS).
- cupraria Geoffroy, 1785: 491 (Musca). Subsequent Usage of Musca cupraria Linnaeus. Stratiomyidae, Sargus cuprarius Linnaeus.
- cuprea Geoffroy, 1785: 489 (Musca). France, Paris. T A Author.
- cuprea Macquart, 1835: 268 (Musca). France, Bordeaux. T ♀ Lost? Muscidae, Musca tempestiva Fallén. Preocc. Geoffroy 1785. Types not found in MNHNP nor MHNL (Pont).
- cuprea Walker, 1853b: 331 (Musca). South Australia. HT ♀ BMNH. Calliphoridae, Metallea incisuralis Macquart. Preocc. Geoffroy 1785. See Dear 1977: 821.
- cuprina Wiedemann, 1830: 654 (Musca). China. T A UZMC. Calliphoridae, Lucilia cuprina Wiedemann.
- cursitans Fabricius, 1775: 782 (Musca). England. T A UZMC F. Empididae, Platypalpus cursitans Fabricius.
- cursoria Scopoli, 1763: 338 (Musca). Carniola. T A DESTROY. Empididae, Tachypeza nubila? Meigen.
- curviforceps Saccà & Rivosecchi, 1956a: 497 (Musca, as domestica spp.). Tanzania, Arusha. ST ♂♀ ISS. Muscidae, Musca curviforceps Saccà & Rivosecchi.
- curvinervis Zetterstedt, 1845: 1350 (Musca). Muscidae, Musca tempestiva Fallén. Published in synonymy, not subsequently validated by usage. A Bouché manuscript name.
- curvipes Gmelin, 1790: 2871 (Musca). N. n. Syrphus clavipes Fabricius. Syrphidae, Merodon clavipes Fabricius.
- curvipes Fallén, 1825: 90 (Musca). Sweden, Skåne. HT ♂ ZIL. Muscidae, Hydrotaea meridionalis Portschinsky. Preocc. Gmelin 1790. See Pont 1984: 282.
- cuthbertsoni Patton, 1936: 470, fig. 2 (Musca). Zimbabwe, Salisbury. LT & BMNH. Muscidae, Musca calleva Walker. Lectotype designated by Pont 1990: 164.
- cyanea Müller, 1764: 85 (Musca). Denmark, Sjaelland, Frederiksdal. T A DE-STROY. Syrphidae. Platycheirus cyaneus Müller.
- cyanea Fabricius, 1781: 439 (Musca). South Africa, Cape of Good Hope. T A DESTROY. Muscidae, Neomyia peronii Robineau-Desvoidy. Preocc. Müller 1764. See Townsend 1931c: 369; Michelsen 1979a: 184.
- cyanella Meigen, 1826: 77 (Musca). Germany, probably Stolberg. LT 

  MNHNP.

  Muscidae, Eudasyphora cyanella Meigen. Lectotype designated by Pont 1986b: 210
- cyanophthalma Gmelin, 1790: 2863 (Musca). N. n. Musca annulata Schrank.
- cylindracea Gmelin, 1790: 2873 (Musca). N. n. Syrphus cylindricus Fabricius. Syrphidae, Ocyptamus cylindricus Fabricius.

cylindrica De Geer, 1776: 30, pl. 1, fig. 12 (Musca). Sweden. T A NRS. Tachinidae, Cylindromyia brassicaria Fabricius.

cylindrica Gmelin, 1790: 2860 (Musca). Europe. T A NMI. Preocc. De Geer 1776. cylindrica Fabricius, 1794: 336 (Musca). Germany. T A UZMC F. Sepsidae, Nemopoda nitidula Fallén. Preocc. De Geer 1776.

cylindrica Fallén, 1817: 242 (Musca). Sweden, Skåne. T A NRS. Tachinidae, Phyllomyia volvulus Fabricius. Preocc. De Geer 1776.

cylindricornis Fabricius, 1794: 332 (Musca). France. T A MNHNP. Lauxaniidae, Lauxania cylindricornis Fabricius.

cylindricus Fabricius, 1781: 429 (Syrphus). West Indies. T A UZMC F. Syrphidae, Ocyptamus cylindricus Fabricius.

cynipsea Linnaeus, 1758a: 599 (*Musca*). Europe. T A LSL. Sepsidae, *Sepsis cynipsea* Linnaeus. 2 sp. in LSL (Dear MS).

cynophila Panzer, 1794c: 22 (Musca). Germany, Mannheim. T A ZMHU. Piophilidae, Thyreophora cynophila Panzer.

dasyops Stein, 1913: 468 (Musca). Tanzania, Kilimanjaro. ST Q ZMHU. Muscidae, Musca dasyops Stein.

dauci Fabricius, 1787: 353 (Musca). Sweden. T A UZMC F. Tephritidae, Urophora solstitialis Linnaeus.

dawsoni Rainbow, 1897: 97 (Degeeria). Ellice Is., Funafuti Atoll, Tuvalu. LT & AMS. Muscidae, Musca domestica Linnaeus. Lectotype designated by Pont 1968: 89.

deceptoria Poda, 1761: 116 (Musca). Austria, Graz. T A Unknown. Tachinidae, Clytiomyia pellucens? Fallén.

decolor Fallén, 1824: 68 (Musca). Sweden, Skåne. LT PNRS. Muscidae, Drymeia vicana Harris. Lectotype designated by Pont 1984: 282.

decore Harris, 1780: 146, pl. 43, fig. 63 (*Musca*). England. T A Unknown. Anthomyidae. Name improperly formed (adverb).

deduco Harris, 1780: 125, pl. 36, fig. 54 (Musca). England. T & Unknown. Muscidae, Helina sexmaculata Preyssler. Name improperly formed (verb).

deduco Harris, 1780: 120, pl. 35, fig. 34 (Musca). England. T A Unknown. Lauxaniidae. Name improperly formed (verb).

defixa Walker, 1856a: 24 (Musca). Singapore. T & BMNH. Calliphoridae, Chrysomya defixa Walker.

degener Haliday, 1833: 165 (*Musca*). Ireland, Down, Holywood. T A NMI. Calliphoridae, *Pollenia degener* Haliday.

dejectus Harris, 1780: 120, pl. 35, fig. 38 (Musca). England. T A Unknown. Heleomyzidae.

delectans Walker, 1859b: 134 (*Musca*). Sulawesi, Makasar. ST 9 BMNH. Calliphoridae, *Isomyia delectans* Walker. HT not found by Townsend 1931c: 376, but 2 STs are in BMNH.

delicate Harris, 1780: 118, pl. 34, fig. 26 (Musca). England. T A Unknown. Sciomyzidae.

demandata Fabricius, 1798: 564 (Musca). Germany, Kiel. T A UZMC F. Otitidae, Physiphora alceae Preyssler.

demano Harris, 1780: 74 (Musca). Incosp. dimano Harris. Tachinidae, Eriothrix rufomaculata De Geer. Name status by present revision.

denigrata Linnaeus, 1767: 981 (Musca). Europe. T A LSL. Bombyliidae, Hemipenthes maurus Linnaeus. 1 sp. in LSL (Dear MS).

dentipes Gmelin, 1790: 2877 (Musca). Subsequent Usage of Syrphus dentipes Fabricius. Syrphidae, Senogaster dentipes Fabricius.

dentipes Fabricius, 1805: 303 (Musca). Denmark. T A DESTROY. Muscidae, Hydrotaea dentipes Fabricius. See Michelsen 1979a: 185.

depressa Swederus, 1787: 287 (Musca). USSR, Kamchatka. T A BMNH B. Syrphidae, Leucozona glaucia Linnaeus.

depressa de Villers, 1789a: 548 (Musca). Bressia [= Bresse, France]. T A Author. Preocc. Swederus 1787.

depressa Gmelin, 1790: 2861 (Musca). Europe. T A NMI. Preocc. Swederus 1787.
depressa Panzer, 1804: 191 (Musca). Germany, Regensburg. T A Unknown. Preocc.
Swederus 1787.

depressa Meigen, 1826: 67 (Musca). Austria & Germany, Berlin & Hamburg. LT ? MNHNP. Calliphoridae, Pollenia labialis Robineau-Desvoidy. Preocc. Swederus 1787. Lectotype designated by Rognes 1991a: 228.

depuncta Fallén, 1825: 80 (Musca). Sweden. LT & NRS. Muscidae, Helina depuncta Fallén. Lectotype designated by Pont 1984: 283.

despecta Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

determinata Walker, 1853b: 345 (Musca). East Indies. HT § BMNH. Muscidae, Musca domestica Linnaeus. See Pont 1990: 164.

devia Linnaeus, 1761: 446 (*Musca*). Sweden. T A Lost. Syrphidae, *Microdon devia* Linnaeus. See Thompson *et al.* 1982: 153.

dexter Harris, 1780: 108, pl. 32, fig. 46 (Musca). England. T A Unknown. Syrphidae, Platycheirus dexter Harris.

diabolus Harris, 1780: 126, pl. 36, fig. 58 (Musca). England. T & Unknown. Muscidae, Hydrotaea diabolus Harris.

diadema Linnaeus, 1767: 982 (Musca). Europe. TA LSL. Dolichopodidae, Medetera diadema Linnaeus. 1 sp. in LSL (Dear MS).

diaphana Fabricius, 1775: 783 (Musca). Germany, Leipzig. T A UZMC F. Dolichopodidae, Argyra diaphana Fabricius.

diaphana Fallén, 1825: 92 (Musca). Subsequent Usage of Anthomyia diaphana Wiedemann. Muscidae, Thricops diaphanus Wiedemann.

diaphana Townsend, 1931b: 157 (Musca). Subsequent Usage of Tachina diaphana Fabricius. Tachinidae, Archytas diaphana Fabricius.

dichotoma Bezzi, 1911: 93 (Musca). Mozambique, Umbeluzi. HT Q USNM. Muscidae, Musca sorbens Wiedemann.

diffidens Walker, 1856a: 26 (Musca). Singapore. T & BMNH. Muscidae, Neomyia diffidens Walker.

diffusa Walker, 1861d: 290 (Musca). Sulawesi, Batchian. HT & BMNH. Calliphoridae, Stilbomyella gloriosa Walker. See Crosskey 1965: 95.

dilecta Wiedemann, 1830: 419 (Musca). Brazil. HT & NMW. Tachinidae, Medinophyto dilecta Wiedemann. See Aldrich 1929: 19; Townsend 1931a: 93.

dimano Harris, 1780: 142, pl. 42, fig. 46 (Musca). England. T A Unknown. Tachinidae, Eriothrix rufomaculata De Geer. Name improperly formed (verb).

dimidiata Panzer, 1798c: 17 (Musca). Austria. T A ZMHU. Tachinidae, Phasia crassipennis Fabricius.

- dioclea Walker, 1849: 869 (Musca). Borneo. T♀BMNH. Calliphoridae, Phumosia dioclea Walker. N. Comb.
- diophthalma Linnaeus, 1758a: 593 (Musca). Sweden. LT & LSL. Syrphidae, Spilomyia diophthalma Linnaeus. Lectotype designated by Thompson et al. 1982: 154.
- dirae Harris, 1780: 112, pl. 33, fig. 57 (Musca). England. T A Unknown. Syrphidae, Pipiza lugubris Fabricius.
- discoidea Fabricius, 1787: 351 (Musca). Denmark, Copenhagen. TA UZMC. Tephritidae, Platyparea discoidea Fabricius.
- discolor Linnaeus, 1758a: 592 (Musca). Nomen nudum. Muscidae, Mesembrina mystacea Linnaeus. Published in synonymy, not subsequently validated by usage. Mentioned under M. intricaria. See Pont 1981: 172.
- discolor Fabricius, 1794: 320 (Musca). India Orientali. HT & UZMC. Calliphoridae, Stomorhina discolor Fabricius. See Dear 1977: 792.
- dispar Turton, 1801: 651 (Musca). Subsequent Usage of Syrphus dispar Fabricius. Syrphidae, Toxomerus dispar Fabricius.
- dispar Fallén, 1823: 58 (Musca). Sweden. LT & NRS. Muscidae, Spilogona dispar Fallén. Lectotype designated by Pont 1984: 283.
- distincta Walker, 1853b: 346 (Musca). Senegal? T \( \rightarrow \) BMNH. Muscidae, Pyrellina distincta Walker.
- ditissima Walker, 1861b: 244 (Musca). New Guinea, Dorey. T & BMNH. Calliphoridae, Isomyia ditissima Walker.
- divaricata Geoffroy, 1785: 495 (Musca). France, Paris. T A Author.
- divaricata Awati, 1916b: 138 (Musca). India. ST Q CRIK. Muscidae, Musca domestica Linnaeus. Preocc. Geoffroy 1785.
- divisa Walker, 1853b: 333 (Musca). East Indies. T & BMNH. Calliphoridae, Rhyncomya divisa Walker.
- divisa Meigen, 1975: 419, pl. 119, fig. 11 (Musca, as domestica var.). Nomen nudum. [Germany, probably Stolberg]. Muscidae, Musca domestica Linnaeus. Varietal name proposed after 1960.
- dizonias Gmelin, 1790: 2880 (Musca). N. n. Musca bifasciata Schrank. Syrphidae, Neoascia annexa Müller.
- doclea Walker, 1849: 904 (Musca). Unknown. T 9 DESTROY.
- dolens Zetterstedt, 1837: 42 (Musca). Nomen nudum. [Sweden, Torne Lappmark, Torneträsk]. T ♂ ZIL. Calliphoridae, Bellardia pubicornis Zetterstedt.
- dolens Zetterstedt, 1838: 654 (Musca). Sweden, Torne Lappmark, Torneträsk. HT & ZIL. Calliphoridae, Bellardia pubicornis Zetterstedt. See Rognes 1991a: 51.
- doliata Geoffroy, 1785: 487 (Musca). France, Paris. T A Author.
- domestica Linnaeus, 1758a: 596 (*Musca*). Europe & America. T A DESTROY. Muscidae, *Musca domestica* Linnaeus. See Pont 1981: 168.
- domestica major De Geer, 1776: 71, pl. 4, fig. 1 (Musca). Nomen nudum. N. n. Musca domestica Linnaeus. Muscidae, Musca domestica Linnaeus. Not available; polynominal, not binominal.
- domitor Harris, 1780: 148, pl. 43, fig. 71 (Musca). England. T Q Unknown. Muscidae, Polietes domitor Harris.
- donysa Walker, 1849: 886 (Musca). Australia. HT & BMNH. Muscidae, Neomyia australis Macquart. See Pont 1973: 203.

- doronici Scopoli, 1763: 333 (Musca). Carniola. T A DESTROY. Calliphoridae, Morinia doronici Scopoli. N. Status
- dorsalis Fabricius, 1775: 786 (Musca). Czechoslovakia, Bohemia. T A UZMC F. Sciomyzidae, Hydromya dorsalis Fabricius.
- dorsalis Walker, 1849: 907 (Musca). Australia. T A BMNH. Calliphoridae, Calliphora augur Fabricius. Preocc. Fabricius 1775.
- dorsomaculata Macquart, 1843: 309 (Musca). Mauritius. LT & MNHNP. Muscidae, Musca xanthomelaena Wiedemann. Lectotype designated by Pont & Matile 1976: 744.
- dotata Walker, 1856a: 25 (Musca). Singapore. T ♂ BMNH. Calliphoridae, Isomyia dotata Walker.
- dubia Fallén, 1825: 84 (*Musca*). *Nomen nudum*. Sweden. T A NRS. Anthomyiidae, *Delia* sp. Published without diagnosis or indication. Mentioned in comparison with *Delia coarctata*.
- dubia Walker, 1853b: 344 (Musca). South Australia. T ♂ BMNH. Calliphoridae, Aphyssura dubia Walker.
- dubitata Fallén, 1825: 82 (Musca). Sweden, Skåne. HT ? ZIL. Anthomyiidae, Hydrophoria lancifer Harris. See Michelsen 1983: 112.
- duplicata Geoffroy, 1785: 471 (Musca). France, Paris. T A Author.
- dux Eschscholtz, 1822: 114 (Musca). Guam. T A Unknown. Calliphoridae, Chrysomya megacephala Fabricius.
- efflatouni Salem & El-Sherif, 1960: 171, fig. 1 (Musca). Egypt, Gebel Elba. HT & HIPHA. Muscidae, Musca sorbens Wiedemann.
- elara Walker, 1849: 870 (Musca). South Africa. T ? BMNH. Calliphoridae, Chrysomya albiceps Wiedemann.
- elata Fabricius, 1781: 441 (Musca). Germany, Kiel. T A UZMC F. Sciomyzidae, Tetanocera elata Fabricius.
- elater Sherborn, 1902: 321 (Musca). missp. elata Fabricius. Sciomyzidae, Tetanocera elata Fabricius.
- elatior Villeneuve, 1937: 4 (*Musca*). Zaire, Lulenga, Mission Rugari. HT & MRAC. Muscidae, *Musca elatior* Villeneuve.
- electa Walker, 1859b: 136 (Musca). Sulawesi, Makassar. LT & BMNH. Muscidae, Neomyia sperata Walker. Lectotype designated by Pont 1966: 92.
- elegans Harris, 1782: index (Musca). Missp. eligans Harris. Syrphidae, Epistrophe eligans Harris.
- elegans de Villers, 1789a: 464, pl. 9, fig. 27 (Musca). Southern France. T A Author. Syrphidae, Episyrphus cannabina Scopoli.
- elephantopus Gmelin, 1790: 2880 (Musca). N. n. Musca crassipes Schrank. Syrphidae, Merodon crassipes Schrank.
- elevata Fabricius, 1805: 303 (Musca). Nova Cambria [= Tasmania, southern tip]. T A Lost. Lauxaniidae, Ceratolauxania elevata Fabricius. See Evenhuis 1988: 193.
- eligans Harris, 1780: 105 (Musca). England. T A Unknown. Syrphidae, Epistrophe eligans Harris.
- elongata Müller, 1764: 85 (Musca). Denmark, Sjaelland, Frederiksdal. T A Author. Sepsidae, Sepsis cynipsea Linnaeus. See Thompson 1981b: 472.
- elongata Fabricius, 1787: 348 (Musca). Sierra Leone. T A UZMC F. Stratiomyidae, Ptecticus posticus Wiedemann. Preocc. Müller 1764. N. Syn.
- elongata de Villers, 1789a: 549 (Musca). Europe. T A Author. Preocc. Müller 1764.

- elongata Fabricius, 1794: 338 (Musca). South America. T A UZMC. Stratiomyidae, Ptecticus testaceus Fabricius. Preocc. Müller 1764.
- elongata Schrank, 1803: 108 (Musca). Subsequent Usage of Syrphus elongatus Fabricius. Syrphidae, Baccha elongata Fabricius.
- emoda Walker, 1849: 872 (Musca). Egypt. T ♀ BMNH. Calliphoridae, Chrysomya albiceps Wiedemann.
- ephippium Gmelin, 1790: 2834 (Musca). Subsequent Usage of Stratiomys ephippium Fabricius. Stratiomyidae, Clitellaria ephippium Fabricius.
- ephippium Fabricius, 1794: 338 (Musca). France. T A BMNH. Micropezidae, Neria ephippium Fabricius.
- ephippium Walckenaer, 1802: 397 (Musca). France, Paris. Micropezidae, Neria ephippium Fabricius. Probably the lack of attribution to Fabricius was an error.
- equestris Fabricius, 1775: 782 (Musca). Brazil. T A BMNH B. Dolichopodidae.
- equestris Meigen, 1826: 57 (Musca). Germany. HT & NMW. Calliphoridae, Lucilia illustris Meigen. Preocc. Fabricius 1775. See Collin 1926: 259.
- ericetorum Gmelin, 1790: 2870 (Musca). Subsequent Usage of Syrphus ericetorum Fabricius. Syrphidae, Asarkina ericetorum Fabricius.
- erinacea Fallén, 1824: 65 (Musca). Sweden, Småland. LT & NRS. Muscidae, Phaonia angulicornis Zetterstedt. Preocc. Fabricius 1794. Lectotype designated by Pont 1984: 283.
- erinaceus Fabricius, 1794: 328 (*Musca*). Denmark, Copenhagen. T A UZMC. Tachinidae, *Peteina erinaceus* Fabricius.
- eristaloides Walker, 1858b: 106 (*Musca*). Moluccas, Aru Islands. T A BMNH. Calliphoridae, *Euphumosia eristaloides* Walker. ST also in UMO (*teste* Pont).
- errans Gmelin, 1790: 2872 (Musca). Subsequent Usage of Syrphus errans Fabricius. Syrphidae, Phytomia errans Fabricius.
- erratica Linnaeus, 1758a: 593 (Musca). Sweden. LT & LSL. Syrphidae, Eriozona erratica Linnaeus. Lectotype designated by Thompson et al. 1982: 154.
- erratica Scopoli, 1763: 345 (Musca). Carniola. T A DESTROY. Syrphidae, Pipiza noctiluca Linnaeus. Preocc. Linnaeus 1758.
- erratica Panzer, 1804: 53 (Musca). Germany, Regensburg. T A Unknown. Preocc. Linnaeus 1758.
- erratica Fallén, 1825: 77 (Musca). Sweden, Bäckaskog or Äsperöd. LT ♂ NRS. Muscidae, Phaonia errans Meigen. Preocc. Linnaeus 1758. Lectotype designated by Pont 1984: 284.
- erro Harris, 1780: 123, pl. 36, fig. 48 (Musca). Nomen nudum. England. T A Unknown. Chloropidae. Name improperly formed (verb).
- erucarum Schrank, 1803: 119 (Musca). N. n. Musca larvarum major De Geer. Tachinidae, Tachina larvarum Linnaeus.
- erythrocephala De Geer, 1776: 146, pl. 29, fig. 2 (Musca). Surinam. LT Q NRS. Calliphoridae, Cochliomyia macellaria Fabricius. Lectotype designated by Thompson 1973: 356.
- erythrocephala Fabricius, 1787: 351 (Musca). Sweden. T A UZMC F. Preocc. De Geer 1776.
- erythrocephala de Villers, 1789b: cxxxvii (Musca). N. n. Musca viridescens de Villers [1789b: 548]. Tephritidae. Preocc. De Geer 1776.

- erythrocephala Meigen, 1826: 62 (Musca). Germany. LT ♂ MNHNP. Calliphoridae, Calliphora vicina Robineau-Desvoidy. Preocc. De Geer 1776. Lectotype designated by Rognes 1991a: 68.
- erythrophthalma Panzer, 1794a: 24 (Musca). Germany, Brunswick. T A ZMHU. Drosophilidae, Drosophila funebris? Fabricius. Type(s) not found (Bächli, in litt.).
- esuriens Turton, 1801: 638 (Musca). Subsequent Usage of Syrphus esuriens Fabricius. Syrphidae, Copestylum brunneum Thunberg.
- esuriens Fabricius, 1805: 301 (Musca). South America. HT & UZMC. Tachinidae, Iteuthelaira esuriens Fabricius. See Townsend 1931b: 170.
- esuriens, Townsend, 1931b: 176 (Musca). Misid. esuriens by Brauer & Bergenstamm & Aldrich. Tachinidae, Belvosia aldrichi Townsend.
- ethiopica Zielke, 1973: 365 (*Musca*). Ethiopia, The Divide, NW of Addis Adaba. HT CNC. Muscidae, *Musca ethiopica* Zielke.
- eustolia Walker, 1849: 909 (Musca). Sierra Leone. T & BMNH. Muscidae, Graphomya eustolia Walker.
- eutaeniata Bigot, 1888: 605 (Musca). Vietnam, Saigon. LT & BMNH. Muscidae, Musca sorbens Wiedemann. Lectotype designated by Pont 1990: 165.
- evectus Harris, 1780: 125, pl. 36, fig. 55 (Musca). England. T ♀ Unknown. Muscidae, Helina evecta Harris.
- evonymellae Ratzeburg, 1844: 172 (Musca). Germany. T A UNKNOWN. Tachinidae, Bactromyia aurulenta Meigen.
- exactus Harris, 1780: 147, pl. 43, fig. 70 (Musca). England. TA Unknown. Anthomyidae.
- exalbida Stein, 1913: 467 (*Musca*). "Cap". T & NMW. Muscidae, *Musca sorbens* Wiedemann. Published in synonymy, not subsequently validated by usage. A male specimen in NMW.
- excors Harris, 1780: 154, pl. 45, fig. 90 (Musca). England. T A Unknown. Anthomyidae.
- exempta Walker, 1856b: 128 (Musca). Borneo, Sarawak. T $\mathfrak P$ BMNH. Calliphoridae, Chlororhinia exempta Walker.
- exilis Harris, 1780: 122, pl. 36, fig. 44 (Musca). England. T A Unknown. Anthomyidae. Preocc. Harris 1780: 117.
- exilis Harris, 1780: 117, pl. 34, fig. 24 (Musca). England. T A Unknown. Scathophagidae, Scathophaga stercoraria Linnaeus.
- eximia Wiedemann, 1819b: 53 (Musca). Brazil. T A NMW. Calliphoridae, Lucilia eximia Wiedemann.
- exinanita Gmelin, 1790: 2867 (Musca). N. n. Syrphus inanis Fabricius. Syrphidae, Copestylum brunneum Thunberg.
- extenuata Rossi, 1790: 312 (*Musca*). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Psilidae, *Chyliza extenuata* Rossi.
- extranea Stephens, 1829b: 306 (*Musca*). England. Muscidae, *Phaonia tuguriorum* Scopoli. Published in synonymy, not subsequently validated by usage. Published in synonymy with *signata* Meigen.
- extrema Walker, 1853b: 348 (Musca). Tasmania. HT & BMNH. Muscidae, Pyrellia tasmaniae Macquart. See Pont 1973: 212.
- fabricii Steyskal, 1968: 9 (Hoplocheiloma). N. n. Musca fasciata Fabricius. Micropezidae, Hoplocheiloma totliana Gmelin. N. Syn.

facultas Harris, 1780: 109, pl. 33, fig. 49 (Musca). England. T A Unknown. Syrphidae, Melanostoma mellinum Linnaeus.

falcata Scopoli, 1763: 330 (Musca). Carniola. T A DESTROY. Tephritidae, Orellia falcata Scopoli.

fallax Linnaeus, 1758a: 592 (Musca). Sweden, LT 2 LSL, Syrphidae, Blera fallax Linnaeus. Lectotype designated by Thompson et al. 1982: 154.

fallax Geoffroy, 1785: 496 (Musca). France, Paris. T A Author. Preocc. Linnaeus 1758.

familiaris Panzer, 1804: 208 (Musca). Germany, Regensburg. T A Unknown.

familiaris Harris, 1869: 336 (Musca). Massachusetts. ST A MCZ. Calliphoridae, Pollenia rudis Fabricius. Preocc. Panzer 1804. See Rognes, 1987b: 498.

fasciata Müller, 1764: 85 (Musca). Denmark, Sjaelland, Frederiksdal. T A Author. Syrphidae, Chrysotoxum fasciatum Müller.

fasciata Fabricius, 1775: 781 (Musca). America, West Indies. T A Auction. Micropezidae, Hoplocheiloma totliana Gmelin. Preocc. Müller 1764. Type(s) originally in collection of Otto Thott.

fasciata de Villers, 1789a: 419 (Musca). Subsequent Usage of Nemotelus fasciata De Geer. Therevidae, Thereva plebeja Linnaeus.

fasciata Fabricius, 1805: 299 (Musca). Guinea. HT & UZMC. Tachinidae, Bogosiella pomerovi Villeneuve. Preocc. Müller 1764. See Townsend 1931c: 388.

fasciata Walker, 1853b: 337 (Musca). Brazil. T 9 BMNH. Calliphoridae, Cochliomyia macellaria Fabricius. Preocc. Müller 1764.

fasciata Stein, 1910: 149 (Musca). Seychelles, Mahé. LT & BMNH. Muscidae, Musca confiscata Speiser. Preocc. Müller 1764. Lectotype designated by Pont 1990: 165.

fasciatus Fabricius, 1779: 233 (Rhagio). Norway. T A UZMC F. Rhagionidae.

fasciolata De Geer, 1776: 124, pl. 7, fig. 14 (Musca). Sweden. T A NRS. Syrphidae, Chrysotoxum fasciolatum De Geer.

favillacea Walker, 1859b: 135 (Musca). Sulawesi, Makassar. HT & BMNH. Calliphoridae, Bengalia ieiuna Fabricius. See Townsend 1931c: 371.

felina Fabricius, 1794: 317 (Musca). New Castilia [= Castilla la Nueva, Spain]. T A UZMC F. Calliphoridae, Rhyncomya felina Fabricius.

felix Walker, 1853b: 338 (Musca). Canary Islands. T & BMNH. Calliphoridae, Chrysomya albiceps Wiedemann. N. Syn.

femorata Linnaeus, 1758a: 595 (Musca). Sweden. LT & LSL. Syrphidae, Chalcosyrphus femoratus Linnaeus. Lectotype designated by Thompson et al. 1982: 154.

femorata Panzer, 1794b: 24 (Musca). Germany, Dresden. T & ZMHU. Syrphidae, Lejops lineatus Fabricius. Preocc. Linnaeus 1758.

fenestralis Linnaeus, 1758a: 597 (Musca). Europe. T A LSL. Scenopinidae, Scenopinus fenestralis Linnaeus. 1 sp. in LSL (Dear MS).

fera Linnaeus, 1761: 453 (Musca). Sweden. T A LSL. Tachinidae, Tachina fera Linnaeus. 5 sp. in LSL (Dear MS).

fergusoni Johnston & Bancroft, 1920a: 201 (Musca). Australia, Queensland, Eidsvold, Upper Burnett River. LT & QMB. Muscidae, Muscafergusoni Johnston & Bancroft. Lectotype designated by Pont 1973: 140.

ferina Fallén, 1817: 242 (Musca). Sweden, Västergötland. T A NRS. Tachinidae, Dinera ferina Fallén.

ferruginea Scopoli, 1763: 340 (Musca). Carniola. T A DESTROY. Xylophagidae, Coenomyia ferruginea Scopoli.

ferruginea Fabricius, 1794: 342 (Musca). India Orientali. T A UZMC F. Tephritidae, Bactrocera dorsalis Hendel. Preocc. Scopoli 1763.

fervida Panzer, 1804: 168 (Musca). Germany, Regensburg. T A Unknown.

festinans Scopoli, 1763: 349 (Musca). Carniola. T A DESTROY. Phoridae, Phora sp.

festiva Linnaeus, 1758a: 593 (Musca). Sweden. LT & LSL. Syrphidae, Xanthogramma festiva Linnaeus. Lectotype designated by Thompson et al. 1982: 155.

festiva Geoffroy, 1785: 479 (Musca). France, Paris. T A Author. Syrphidae, Chrysotoxum arcuatum Linnaeus. Preocc. Linnaeus 1758.

festiva Donovan, 1811: 13, pl. 511 (Musca). England. T Q UNKNOWN. Dolichopodidae. Preocc. Linnaeus 1758.

fictor Harris, 1780: 152, pl. 45, fig. 81 (Musca). England. T A Unknown. Muscidae, Helina fictor Harris. Unrecognized.

fieldi Rainbow, 1897: 98, pl. 1, fig. 4 (Ebenia). Ellice Is, Funafuti Atoll, Tuvalu. HT AMS. Muscidae, Musca vetustissima Walker. See Pont 1968: 90.

filata Gmelin, 1790: 2830 (Musca). Subsequent Usage of Bibio filata Fabricius. Mydidae, Mydas clavatus Drury.

filiformis Fabricius, 1794: 337 (Musca). Germany. T A UZMC F. Micropezidae, Micropeza corrigiolata Linnaeus.

fimetaria Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Psilidae, Psila fimetaria Linnaeus. 2 sp. in LSL (Dear MS).

fimeti Linnaeus, 1761: 456 (Musca). Sweden. T A Lost. Sepsidae, Themira putris Linnaeus. Types lost, not in LSL (teste Pont MS).

fimetorum Geoffroy, 1785: 496 (Musca). France, Paris. T A Author.

flauescens Fabricius, 1798: 565 (Musca). Morocco, Tangiers. T A UZMC. Tephritidae, Euleia marmorea Fabricius. Preocc. Gmelin 1790.

flauicans Müller, 1764: 85 (*Musca*). Denmark, Sjaelland, Frederiksdal. T A Author. flava Linnaeus, 1758a: 600 (*Musca*). Europe. T A LSL. Chyromyidae, *Chyromya flava* Linnaeus. 1 sp. in LSL (Dear MS).

flava Geoffroy, 1785: 499 (Musca). Subsequent Usage of Musca flava Linnaeus. Chyromyidae, Chyromya flava Linnaeus.

flava Schellenberg, 1803: 62 (Musca). Subsequent Usage of Musca flava Linnaeus. Psilidae, Psila fimetaria Linnaeus. Misidentification.

flaveola Fabricius, 1794: 343 (Musca). Denmark, Copenhagen. T A UZMC. Dryomyzidae, Dryomyza flaveola Fabricius.

flavescens de Villers, 1789a: 433 (Musca). Subsequent Usage of Volucella flavescens Geoffroy. Syrphidae.

flavescens Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

flavicans Panzer, 1798a: 18 (Musca). Austria. T 9 ZMHU. Preocc. Müller 1764.

flavicans Doleschall, 1859: 112 (Musca). Amboina. T A NMW. Calliphoridae, Pollenia sp. Preocc. Müller 1764. Type(s) not found in Vienna [teste Pont].

flavicans Sherborn, 1902: 373 (Musca). Missp. flauicans Müller.

flaviceps Ratzeburg, 1844: 172 (Musca). Germany. T A Unknown. Tachinidae, Ceromyia flaviceps Ratzeburg.

flaviceps Walker, 1849: 870 (Musca). Subsequent Usage of Lucilia flaviceps Macquart. Calliphoridae, Chrysomya megacephala Fabricius.

flavicornis Gmelin, 1790: 2874 (Musca). Subsequent Usage of Syrphus flavicornis Fabricius. Syrphidae, Cheilosia flavicornis Fabricius.

flavicornis Fallén, 1825: 88 (Musca). Sweden, Skåne. HT & ZIL. Muscidae, Coenosia flavicornis Fallén. See Pont 1984: 284.

flavifacies Bigot, 1888: 606 (Musca). New Caledonia. HT Q BMNH. Muscidae, Musca domestica Linnaeus. See Pont 1990: 165.

flavifrons Panzer, 1798c: 22 (Musca). Austria. T A ZMHU. Sciomyzidae, Limnia unguicornis Scopoli.

flavinervis Thomson, 1868: 547 (Musca). Ross Island [=Cocos-Keeling]. T ? NRS. Muscidae. Musca domestica Linnaeus.

flavipalpis Meigen, 1838: 305 (Musca). N. n. Musca autissiodorensis Robineau-Desvoidy. Calliphoridae, Calliphora autissiodorensis Robineau-Desvoidy.

flavipennis Fallén, 1823: 59 (Musca). Sweden, Västergötland. LT Q ZIL. Anthomyiidae, Chirosia flavipennis Fallén. Lectotype designated by Michelsen 1983: 112.

flavipennis Bigot, 1887: clxxiii (Musca). USA, Rocky Mts. LT & BMNH. Muscidae, Musca domestica Linnaeus. Preocc. Fallén 1823. Lectotype designated by Pont 1990: 165.

flavipes Fabricius, 1781: 420 (Rhagio). Germany. T A UZMC F. Athericidae, Atherix flavipes Fabricius.

flavipes de Villers, 1789a: 419 (Musca). Subsequent Usage of Nemotelus flavipes De Geer.

flavipes Fabricius, 1794: 254 (Bibio). Germany. T A UZMC F. Therevidae, Dialineura anilis Linnaeus.

flavipes Schrank, 1803: 123 (Musca). Germany, Bavaria. T A Unknown. Sciomyzidae, Sepedon sphegeus Fabricius.

flavipes Fallén, 1825: 90 (Musca). Sweden, Skåne. LT ♂ NRS. Anthomyiidae, Pegomya pulchripes Loew. Preocc. Schrank 1803. Lectotype designated by Michelsen 1983: 112.

flavissima Turton, 1801: 629 (Musca). Subsequent Usage of Stratiomys flavissima Rossi. Stratiomyidae, Odontomyia flavissima Rossi.

fletcheri Patton & Senior-White, 1924: 574, pl. 31, fig. 21 (Musca). India, Samalkota. LT & BMNH. Muscidae, Musca fletcheri Patton & Senior-White. Lectotype designated by Pont 1990: 165.

floralis Fallén, 1824: 71 (Musca). Sweden, Skåne. LT & ZIL. Anthomyiidae, Delia floralis Fallén. Lectotype designated by Michelsen 1983: 112.

floralis Robineau-Desvoidy, 1830: 397 (Musca). France. T & DESTROY. Muscidae, Musca autumnalis De Geer. Preocc. Fallén 1824.

floralis Meigen, 1838: 307 (*Musca*). Subsequent Usage of *Pollenia floralis* Robineau-Desvoidy. Calliphoridae, *Pollenia rudis* Fabricius.

florea Linnaeus, 1758a: 591 (Musca). Sweden. LT & LSL. Syrphidae, Myathropa florea Linnaeus. Lectotype designated by Thompson et al. 1982: 156.

florea Fabricius, 1794: 255 (Bibio). Germany. T A UZMC F. Phoridae, Diplonevra florescens Turton. Preocc. Linnaeus 1758. N. Syn.

florescens Turton, 1801: 636 (Musca). N. n. Bibio florea Fabricius. Phoridae, Diplonevra florescens Turton. N. Status

florescentiae Linnaeus, 1758a: 601 (Musca). Europe. T A LSL. Tephritidae, Trypeta florescentiae Linnaeus.

florum Fabricius, 1794: 352 (Musca). Italy. T A UZMC F. Opomyzidae, Opomyza florum Fabricius.

formosa Scopoli, 1763: 339 (Musca). Carniola. T A DESTROY. Stratiomyidae, Chloromyia formosa Scopoli.

formosa Panzer, 1798b: 21 (Musca). Austria. T A ZMHU. Otitidae, Otites elegans Latreille. Preocc. Scopoli 1763. N. Syn.

formosa Donovan, 1830: 320 (Musca). [Australia]. Tachinidae, Rutilia formosa Robineau-Desvoidy. Published in synonymy, not subsequently validated by usage.

formosana Malloch, 1925: 375 (Musca). Taiwan, Okaseki. HT & DEI. Muscidae, Musca formosana Malloch.

formosus Harris, 1780: 107, pl. 32, fig. 43 (Musca). England. T A Unknown. Syrphidae, Epistrophe grossulariae Meigen. Preocc. Scopoli 1763.

fortunata Walker, 1859: 137 (Musca). Sulawesi, Makassar. T & BMNH. Calliphoridae, Hemipyrellia ligurriens Wiedemann.

freedmani Paterson, 1957: 108, fig. 3 (Musca). Botswana, near Sekhuma. HT & SAIMR. Muscidae, Musca freedmani Paterson.

frigida Fabricius, 1805: 307 (Musca). Norway, Lapland. T A UZMC. Coelopidae, Coelopa frigida Fabricius.

frit Linnaeus, 1758a: 598 (*Musca*). Europe. T A LSL. Chloropidae, *Oscinella frit* Linnaeus. 3 sp. in LSL (Dear MS).

frondescentiae Linnaeus, 1758a: 601 (Musca). Europe. T A LSL. Otitidae, Herina frondescentiae Linnaeus. 2 sp. in LSL (Dear MS).

frontalis Latreille, 1802: 457 (Musca). Unknown (=Europe). T A MNHNP. Sarcophagidae, Metopia argyrocephala Meigen.

frontalis Gimmerthal, 1834: 115 (Musca). Livonia (= Estonia & Latvia). T & LMNR. Muscidae. Preocc. Latreille 1802.

frontalis Macquart, 1843: 308, pl. 21, fig. 3 (Musca). Algeria, Algiers. T & MHNL. Muscidae, Musca domestica Linnaeus. Preocc. Latreille 1802.

frontalis Rondani, 1868: 51 (Musca). Italy. T A USB. Muscidae, Musca domestica Linnaeus. Preocc. Latreille 1802.

frutetorum Gmelin, 1790: 2870 (Musca). Subsequent Usage of Syrphus frutetorum Fabricius. Syrphidae, Parhelophilus frutetorum Fabricius.

fucata Fabricius, 1794: 359 (Musca). West Indies. T A UZMC F. Tephritidae, Acinia tessariae Kieffer & Jorgensen. Preocc. Harris 1780.

fucatus Harris, 1780: 83, pl. 24, fig. 29 (Musca). England. T A Unknown. Syrphidae, Xylota segnis Linnaeus.

fuciformis Fabricius, 1794: 290 (Syrphus). France. T A MNHNP. Syrphidae, Mallota fuciformis Fabricius.

fucina Walker, 1849: 883 (Musca). South Africa. T $\mbox{\sc PBMNH}$ . Calliphoridae, Lucilia cuprina Wiedemann.

fulges Harris, 1780: 87, pl. 25, fig. 23 (Musca). England. T A Unknown. Calliphoridae, Lucilia caesar Linnaeus.

fulva Gmelin, 1790: 2878 (Musca). Europe. T ANMI. Syrphidae, Cheilosia illustrata Harris. Preocc. Harris 1780.

fulvescens Robineau-Desvoidy, 1830: 397 (Musca). Cayenne. T & DESTROY. Muscidae, Musca domestica Linnaeus.

fulvicornis Meigen, 1838: 307 (Musca). Subsequent Usage of Pollenia fulvicornis Robineau-Desvoidy. Calliphoridae, Pollenia rudis Fabricius.

fulvicornis Zetterstedt, 1859: 6186 (Musca). Sweden, Skåne. HT & ZIL. Calliphoridae, Pollenia viatica Robineau-Desvoidy. Preocc. Robineau-Desvoidy 1830. See Rognes 1991aa: 230, 1991ab: 483.

fulvimaculata Manuel, 1811: 20 (Musca). N. n. Musca quadrimaculata Swederus.

Calliphoridae, Calliphora quadrimaculata Swederus.

fulvipalpis Meigen, 1838: 308 (Musca). Subsequent Usage of Pollenia fulvipalpis Macquart. Calliphoridae, Pollenia rudis Fabricius.

fulvipes Geoffroy, 1785: 495 (Musca). France, Paris. T A Author.

fulvithorax Santos Abreu, 1976: 140 (Musca, as vitripennis var.). Nomen nudum. Canary Is. Muscidae, Musca osiris Wiedemann. Varietal name proposed after 1960.

fulviventris Schrank, 1781: 469 (Musca). Austria, Vienna. T A Unknown. Platystomatidae, Platystoma seminationis Fabricius.

fulvus Harris, 1780: 80, pl. 24, fig. 22 (Musca). England, Essex, East Tilbury. T A Unknown. Syrphidae, Arctophila superbiens Müller.

fumigata Scopoli, 1763: 336 (Musca). Carniola. T A DESTROY. Sciomyzidae, Euthycera fumigata Scopoli.

fumipennis Walker, 1856a: 25 (Musca). Singapore. T & BMNH. Calliphoridae, Hypopygiopsis fumipennis Walker.

funebres Harris, 1780: 106, pl. 32, fig. 37 (Musca). England. Syrphidae, Cheilosia funebres Harris.

funebris Harris, 1782: index (Musca). Missp. funebres Harris. Syrphidae, Cheilosia funebres Harris.

funebris Fabricius, 1787: 345 (*Musca*). Denmark, Copenhagen. ST Q UZMC. Drosophilidae, *Drosophila funebris* Fabricius. See Bächli 1982: 293.

funesta Turton, 1801: 648 (Musca). Subsequent Usage of Syrphus funestus Fabricius. Syrphidae, Merodon funesta Fabricius.

fungorum Scopoli, 1763: 337 (Musca). Carniola. T A DESTROY.

fungorum De Geer, 1776: 89, pl. 5, fig. 2 (Musca). Sweden. LT & NRS. Anthomyiidae, Pegomya steini Hendel. Preocc. Scopoli 1763. Lectotype designated by Persson, Pont & Michelsen 1984: 92.

funibres Harris, 1780: 74 (Musca). Incosp. funebres Harris. Syrphidae, Cheilosia funebres Harris. Name status by present revision.

furcata Fabricius, 1794: 343 (Musca). France. T A MNHNP. Piophilidae, Centrophlebomyia furcata Fabricius.

furcata Turton, 1801: 622 (Musca). N. n. Musca fucata Fabricius. Tephritidae, Acinia tessariae Kieffer & Jorgensen. Preocc. Fabricius 1794.

furta Linnaeus, 1767: 991 (Musca). Sweden, Uppsala. LT & ZIU. Drosophilidae, Stegana furta Linnaeus. Lectotype designated by Bächli 1982: 299.

fusca de Villers, 1789a: 511 (Musca). Sweden. T A Unknown. Preocc. Harris 1776. fusca Gmelin, 1790: 2833 (Musca). Non-European. T A NMI. Bombyliidae. Preocc. Harris 1776.

fuscata Gmelin, 1790: 2865 (*Musca*). Subsequent Usage of *Tipula fuscata* Fabricius. Anisopodidae, *Sylvicola fuscatus* Fabricius.

fuscata Fallén, 1825: 85 (Musca). Sweden, Skåne. LT & NRS. Muscidae, Phaonia fuscata Fallén. Lectotype designated by Pont 1984: 284.

fuscipennis Fabricius, 1805: 291 (Musca). Sumatra. HT Q UZMC. Calliphoridae, Silbontyia fuscipennis Fabricius. See Townsend 1931c: 374; Crosskey 1965:68.

fuscipennis von Roser, 1840: 58 (Musca). Germany, Württemberg. T A SMN. Muscidae, Pyrellia rapax Harris. Preocc. Fabricius 1805.

fuscipes Gmelin, 1790: 2843 (Musca). Europe. T A NMI.

fuscula Fallén, 1825: 86 (Musca). Sweden, Skåne, Äsperöd. LT & ZIL. Fanniidae, Fannia fuscula Fallén. Lectotype designated by Pont 1984: 285.

fuscus Scopoli, 1763: 355 (Conops). N. n. Conops interruptus Poda. Syrphidae, Eristalis interrupta Poda.

fuscus Harris, 1776: 42, pl. 10, fig. 3 (Musca). England. T A Unknown. Syrphidae, Eristalis intricaria Linnaeus.

fusiformis Turton, 1801: 642 (Musca). N. n. Musca fuciformis Fabricius. Syrphidae, Mallota fuciformis Fabricius.

gabonensis Macquart, 1855: 135 (Musca). Gabon. HT & BMNH. Muscidae, Musca gabonensis Macquart. See Pont 1990: 165.

galeata Rossi, 1794: 73 (Musca). Italy. T A ZMHU.

galpinus Harris, 1780: 118, pl. 35, fig. 28 (Musca). England. T A Unknown. Opomyzidae.

gamelia Walker, 1849: 878 (Musca). Uruguay, Montevideo. T & BMNH. Calliphoridae, Compsomyiops fulvicrura Robineau-Desvoidy.

gangraenosa Panzer, 1798b: 22 (Musca). Austria. T A ZMHU. Otitidae, Melieria gangraenosa Panzer. N. Status

gastrodes Rossi, 1794: 67, pl. 3, fig. 11 (*Musca*). Italy. T A ZMHU. Tachinidae. gavisa Walker, 1859: 138 (*Musca*). Sulawesi, Makassar. T Q BMNH. Muscidae, *Neomyia gavisa* Walker.

genarum Zetterstedt, 1837: 42 (Musca). Nomen nudum. [Sweden, Torne Lappmark, Torneträsk]. T & ZIL. Calliphoridae, Calliphora genarum Zetterstedt.

genarum Zetterstedt, 1838: 658 (Musca). Sweden, Tome Lappmark, Torneträsk. LT & ZIL. Calliphoridae, Calliphora genarum Zetterstedt. Lectotype designated by Rognes 1986: 352.

geniculata De Geer, 1776: 38, pl. 2, fig. 19 (Musca). Not given, probably Sweden. T A Lost. Tachinidae, Siphona geniculata De Geer. See Andersen 1982: 168.

geniculata Fallén, 1825: 89 (Musca). Sweden. LT & NRS. Muscidae, Coenosia femoralis Robineau-Desvoidy. Preocc. De Geer 1776. Lectotype designated by Pont 1984: 285.

gentilis Meigen, 1838: 302 (Musca). Germany. T A. MNHNP. Calliphoridae, Melinda gentilis Robineau-Desvoidy. N. Syn.

geographica Geoffroy, 1785: 478 (Musca). France, Paris. T A Author.

germana Walker, 1849: 880 (Musca). Subsequent Usage of Lucilia germana Robineau-Desvoidy. Calliphoridae, Onesia germana Robineau-Desvoidy.

germanica Gmelin, 1790: 2842 (Musca). N. n. Musca plebeja Fabricius. Tachinidae, Dexia rustica? Fabricius.

germinationis Linnaeus, 1758a: 600 (Musca). Europe. T A LSL. Opomyzidae, Opomyza germinationis Linnaeus. 2 sp. in LSL (Dear MS).

germinationis Rossi, 1790: 316 (Musca). Subsequent Usage of Musca germinationis Linnaeus. Opomyzidae, Opomyza germinationis Linnaeus.

gibba Müller, 1776: 175 (Musca). Iceland. T A DESTROY. Dolichopodidae, Dolichopus plumipes Scopoli.

gibba Rossi, 1794: 73 (Musca). Italy. T A ZMHU. Preocc. Müller 1776.

gibba Fabricius, 1805: 297 (Musca). South America. T A UZMC. Curtonotidae, Curtonotum taeniatum Hendel. Preocc. Müller 1776. N. Syn.

gibbosa Linnaeus, 1758a: 593 (Musca). Sweden. T A LSL. Acroceridae, Ogcodes gibbosa Linnaeus. 1 sp. in LSL (Dear MS).

gibbosa De Geer, 1776: 35, pl. 2, fig. 1 (Musca). Sweden. TANRS. Chamaemyiidae. Preocc. Linnaeus 1758.

gibbosa Thunberg, 1789: 90 (Musca). Nomen nudum. Proposed as n. n. Hippobosca cincta Thunberg. Preoce. Linnaeus 1758.

gibsoni Patton & Cragg, 1913a: 14, pl. 1 (Musca). India, Kodaikanal. LT & BMNH. Muscidae, Musca convexifrons Thomson. Lectotype designated by Pont 1990: 165.

gigantea Lichtenstein, 1796: 213 (Musca). Unknown. T A Auction.

glabrata Fabricius, 1794: 341 (Musca). France. T A MNHNP. Lauxaniidae, Calliopomyia glabrata Fabricius.

glabricula Fallén, 1825: 75 (Musca). Sweden. LT & NRS. Muscidae, Hydrotaea glabricula Fallén. Lectotype designated by Pont 1984: 285.

glaucia Linnaeus, 1758a: 593 (Musca). Sweden. LT Q LSL. Syrphidae, Leucozona glaucia Linnaeus. Lectotype designated by Thompson et al. 1982: 156.

glaucoptera Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

globosa Gmelin, 1790: 2875 (Musca). Subsequent Usage of Syrphus globosus Fabricius. Tachinidae, Gymnosoma globosum Fabricius.

globulipes Geoffroy, 1785: 495 (Musca). France, Paris. T A Author. Empididae, Hilara globulipes Geoffroy. N. Comb.

gloriosa Walker, 1858b: 104 (*Musca*). Moluccas, Aru Islands. HT 9 BMNH. Calliphoridae, *Stilbomyella gloriosa* Walker. See Crosskey 1965: 95.

graeca Pontoppidan, 1765: 229 (Musca). Denmark. T A Unknown. Stratiomyidae, Oxycera trilineata Linnaeus. Suppressed by I.C.Z.N. 1987: 149.

graminum Fabricius, 1775: 785 (Musca). Germany, Leipzig. T A UZMC F. Otitidae. graminum Fabricius, 1794: 346 (Musca). France, Paris. T A Author. Otitidae, Dorycera aquatica Geoffroy. Preocc. Fabricius 1775. N. Syn.

grandis Schrank, 1837: 17 (Musca). Germany, Burghusii [= Italy, Burgursio]. T A Unknown. Xylophagidae, Coenomyia ferruginea Scopoli.

granditarsa Forster, 1770: 15 (Musca). Nomen nudum. England. Syrphidae, Platycheirus granditarsus Forster. Published without diagnosis or indication.

granditarsa Forster, 1771: 99 (Musca). England. T A LSL? Syrphidae, Platycheirus granditarsus Forster. See Day & Fitton 1977.

greeni Patton, 1933d: 477, fig. 1 (Musca). Malaya, Kuala Lumpur. LT & BMNH. Muscidae, Musca formosana Malloch. Lectotype designated by Pont 1990: 166.

grisea de Villers, 1789a: 511 (Musca). Sweden, Skåne. T A Unknown.

grisea Fabricius, 1805: 293 (Musca). South America. LT 9 UZMC. Muscidae, Cyrtoneurina spiloptera Wiedemann. Preocc. de Villers 1789. Lectotype designated by Michelsen 1979a: 185.

grisea Fallén, 1823: 57 (Musca). Sweden, Västergötland. LT & NRS. Anthomyiidae, Leucophora grisella Hennig. Preocc. de Villers 1789. Lectotype designated by Michelsen 1983: 113.

grisella Robineau-Desvoidy, 1863: 622 (Musca). France, Paris. T A DESTROY. Muscidae, Musca autumnalis De Geer.

grisescens Fallén, 1817: 243 (Musca). Sweden. T & NRS. Tachinidae, Dinera grisescens Fallén.

groenlandica Zetterstedt, 1838: 657 (Musca). Norway, Greenland (Lectotype) & Sweden. LT & UZMC. Calliphoridae, Protophormia terraenovae Robineau-Desvoidy. Lectotype designated by Rognes 1991a: 136.

grossa Linnaeus, 1758a: 596 (Musca). Europe. TA LSL. Tachinidae, Tachina grossa Linnaeus. 2 sp. in LSL (Dear MS).

grossificationis Linnaeus, 1758a: 599 (Musca). Europe. HT Q LSL. Rhinophoridae, Melanophora roralis Linnaeus. See Crosskey 1977: 51.

grossipes Linnaeus, 1767: 988 (Musca). Europe. T A LSL. Empididae, Hybos grossipes Linnaeus. 1 sp. in LSL (Dear MS).

guineensis Wiedemann, 1824: 48 (Musca). Guinea. T & DESTROY. Muscidae, Neomyia guineensis Wiedemann.

gulo Fabricius, 1805: 283 (Musca). South America. HT & UZMC. Sarcophagidae, Paraprissopoda gulo Fabricius. See Townsend 1931a: 74; Pape 1986: 302.

gurnei Patton & Cragg, 1912: 513 (Musca). India, Kodaikanal. LT & BMNH. Muscidae, Musca inferior Stein. Lectotype designated by Pont 1990: 166.

gurneyi Patton, 1922: 422 (Musca). Missp. gurnei Patton & Cragg. Muscidae, Musca inferior Stein.

guttata Geoffroy, 1785: 495 (Musca). France, Paris. T A Author.

gymnosomea Rondani, 1862: 222 (Musca). Malta. T A USB. Muscidae, Musca domestica Linnaeus.

haemorrhoa Gravenhorst, 1807: 378 (*Musca*). Unknown, probably Germany. T A Lost. Sarcophagidae.

haemorrhoidalis de Villers, 1789a: 548, pl. 10, fig. 8 (*Musca*). France, Nemausum [? = Nemours]. T A Author. Tephritidae.

haemorrhoidalis Fallén, 1817: 237 (Musca). Sweden. LT ♂ NRS. Sarcophagidae, Ravinia pernix Harris. Preocc. de Villers 1789. Lectotype designated by Pape 1986: 304.

halterata Panzer, 1798a: 13 (*Musca*). Austria. T A ZMHU. Sarcophagidae, *Nyctia halterata* Panzer.

hamata Fallén, 1823: 61 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Drymeia hamata Fallén. Lectotype designated by Pont 1984: 285.

harpyia Harris, 1835: 599 (Musca). Nomen nudum. Massachusetts. T A MCZ. Muscidae, Musca domestica Linnaeus. Published without diagnosis or indication.

harpyia Harris, 1841: 413 (Musca). New England. T A MCZ. Muscidae, Musca domestica Linnaeus.

hartigii Ratzeburg, 1844: 172 (Musca). Germany. T A Unknown. Tachinidae, Goniocera versicolor Fallén.

hauriens Wiedemann, 1830: 398 (Musca). Egypt. T ♀ SMF. Sarcophagidae.

hebes Harris, 1780: 158, pl. 47, fig. 4 (Musca). England. T A Unknown. Dolichopodidae.

hebes Walker, 1853b: 338 (Musca). Senegal? T Q BMNH. Calliphoridae, Chrysomya chloropyga Wiedemann. Preocc. Harris 1780.

hederacea Geoffroy, 1785: 491 (Musca). France, Paris. T A Author. Calliphoridae, Onesia hederacea Geoffroy. N. Comb.

heidiae Zielke, 1974: 5 (Musca). Tanzania, Manyara Nat. Park, Res. Camp. HT & CAS. Muscidae, Musca heidiae Zielke.

helenii de Villers, 1789a: 536 (Musca). N. n. Musca duplicata Geoffroy.

helianthi Rossi, 1794: 73 (Musca). Italy. T A ZMHU. Tephritidae, Acanthiophilus helianthi Rossi.

helluo Fabricius, 1805: 295 (Musca). Austria. T A UZMC F. Tachinidae, Heliozeta helluo Fabricius. "HT not seen" Townsend 1931c: 387.

helvola Meuschen, 1787: 212 (Musca). Unknown. T A Auction.

hemiptera Turton, 1801: 639 (Musca). Subsequent Usage of Syrphus hemipterus Fabricius. Tachinidae, Allophora hemiptera Fabricius.

hemipterus Donovan, 1807: 95 (Musca). Subsequent Usage of Syrphus hemipterus Fabricius. Tachinidae, Allophora hemiptera Fabricius.

hemisphaerica Geoffroy, 1785: 480 (Musca). France, Paris. TA Author. Tachinidae, Gymnosoma rotundatum Linnaeus.

heraclei Fabricius, 1794: 354 (Musca). Germany, Kiel. T A UZMC F. Tephritidae, Tephritis postica Loew.

heraclii Linnaeus, 1758a: 600 (Musca). Europe. T A LSL. Tephritidae, Euleia heraclii Linnaeus. See White 1987: 103.

heraea Walker, 1849: 881 (Musca). North America? T & BMNH. Muscidae, Neomyia cornicina Fabricius.

hervei Villeneuve, 1922: 335 (Musca). China & Tonkin. ST ♂ ♀ MNHNP. Muscidae, Musca hervei Villeneuve.

hieracii Fabricius, 1775: 787 (Musca). England. T A UZMC F. Sciomyzidae, Trypetoptera punctulata Scopoli.

hilaris Fallén, 1823: 57 (Musca). Sweden, Västergötland. LT P NRS. Anthomyiidae, Eustalomyia hilaris Fallén. Lectotype designated by Michelsen 1983: 113.

hilli Johnston & Bancroft, 1920e: 35 (Musca). Australia, Queensland. LT & QMB. Muscidae, Musca terraereginae Johnston & Bancroft. Lectotype designated by Pont 1973: 181.

hilli Johnston & Bancroft, 1920b: 23 (Musca). Nomen nudum. Australia, Queensland. Muscidae, Musca terraereginae Johnston & Bancroft. [also 1920c: 52, 1920d: 74].

himella Walker, 1849: 876 (Musca). Unknown. T & DESTROY. Calliphoridae, Chrysomya albiceps Wiedemann.

hirsuta de Villers, 1789a: 427, pl. 9, fig. 11 (Musca). France, Massiliam (=Marseille). TA Author. Bombyliidae, Hemipenthes maurus Linnaeus. Synonymy by Evenhuis (in litt.). N. Syn.

hirsuta de Villers, 1789a: 509 (Musca). Europe. T A Unknown. Acalyptrate. Preocc. de Villers 1789.

hirsuta Donovan, 1810: 60, pl. 490, fig. 2 (Musca). England. T & UNKNOWN. Tachinidae, Servillia lurida Fabricius. Preocc. de Villers 1789.

hirsutissima de Razoumowsky, 1789: 230 (Musca). Switzerland. T A UNKNOWN. Syrphidae, Volucella bombylans Linnaeus.

hirta Drury, 1773: 109 (Musca). Jamaica. T A UNKNOWN. Tachinidae.

hirta de Villers, 1789a: 420 (Musca). Subsequent Usage of Nemotelus hirta De Geer. Therevidae, Thereva nobilitata Fabricius.

hirta Gravenhorst, 1807: 379 (Musca). Unknown, probably Germany. T A Lost. Tachinidae. Preocc. Drury 1773.

hirticeps Fallén, 1824: 67 (Musca). Sweden, Skåne. HT & ZIL. Muscidae, Hydrotaea hirticeps Fallén. See Pont 1984: 285.

hirticollis Harris, 1835: 599 (Musca). Nomen nudum. Massachusetts. Published without diagnosis or indication.

histrionica Fabricius, 1794: 343 (Musca). India Orientali. T A UZMC F. Psilidae.

hoi Fan, 1965: 119, pl. 18, fig. 381 (Musca). China, Shensi, Tsuihuashan. HT & SIE. Muscidae, Musca pilifacies Emden.

hordei Linnaeus, 1764c: 354 (*Musca*). *Nomen nudum*. Sweden. T A LSL. Chloropidae, *Oscinella frit* Linnaeus. Published in non-binominal work.

hordei Bjerkander, 1777: 34 (Musca). Sweden. T A UNKNOWN. Chloropidae, Oscinella frit Linnaeus.

hortensia Wiedemann, 1824: 49 (Musca). Java. LT & UZMC. Muscidae, Morellia hortensia Wiedemann. Lectotype designated by Pont 1973: 221.

hortensis Geoffroy, 1785: 481 (Musca). France, Paris. T A Author.

horticola De Geer, 1776: 140, pl. 8, fig. 12 (Musca). N. n. Musca nemorum Linnaeus. Syrphidae, Eristalis arbustorum Linnaeus.

hortona Walker, 1849: 894 (Musca). New Zealand. T & BMNH. Calliphoridae, Xenocalliphora hortona Walker.

hortorum Gmelin, 1790: 2869 (Musca). Subsequent Usage of Syrphus hortorum Fabricius. Syrphidae, Palpada hortorum Fabricius.

hortorum Fallén, 1817: 252 (Musca). Sweden. LT & NRS. Muscidae, Morellia hortorum Fallén. Lectotype designated by Pont 1984: 286.

hortulana Linnaeus, 1758b: (Musca). Subsequent Usage of Tipula hortulana Linnaeus. Bibionidae, Bibio hortulanus Linnaeus. [also Linnaeus 1760: 244].

hortulana Scopoli, 1763: 343 (*Musca*). Carniola. T A DESTROY. Syrphidae, *Cheilosia hortulana* Scopoli.

hortulana Rossi, 1790: 313 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Otitidae, Ceroxys hyalinata Panzer. Preoce. Scopoli 1763. N. Syn.

hortulana Wiedemann, 1830: 417 (Musca). China. ST P DESTROY. Muscidae, Morellia hortensia Wiedemann. Preocc. Scopoli 1763. See Emden 1965: 110.

hottentota Robineau-Desvoidy, 1830: 399 (Musca). South Africa, Cape of Good Hope. T & DESTROY. Muscidae, Musca domestica Linnaeus. Preoce. Linnaeus 1758.

hottentotta Linnaeus, 1758a: 590 (Musca). Europe. T A LSL. Bombyliidae, Anthrax hottentotta Linnaeus. 2 sp. in LSL (Dear MS).

hugonis Pont, 1980: 725 (Musca). N. n. Musca longipes Paterson. Muscidae, Musca hugonis Pont.

humilis Wiedemann, 1830: 418 (Musca). East Indies. LT & NMW. Muscidae, Musca sorbens Wiedemann. Lectotype designated by Pont 1973: 287.

hyalinata Panzer, 1798c: 24 (Musca). Austria. T A ZMHU. Otitidae, Ceroxys hyalinata Panzer. N. Status

hyaİinata Fallén, 1823: 64 (Musca). Sweden. LT & NRS. Muscidae, Thricops semicinereus Wiedemann. Preocc. Panzer 1798. Lectotype designated by Pont 1984: 286.

hydroleon Linnaeus, 1758a: 589 (Musca). Europe. T A LSL. Stratiomyidae, Odontomyia hydroleon Linnaeus. 1 sp. in LSL (Dear MS).

hydrophila Rossi, 1794: 74 (Musca). Italy. T A ZMHU.

hydropica Scudder, 1877: 757 (*Musca*). Colorado, White River [Oligocene]. T X USNM.

hyoscyami Linnaeus, 1758a: 600 (Musca). Europe. T A LSL. Tephritidae, Tephritis hyoscyami Linnaeus. See White 1987: 103.

hypoleon Linnaeus, 1767: 980 (Musca). Germany. T A LSL. Stratiomyidae, Oxycera trilineata Linnaeus. 3 sp. in LSL (Dear MS).

hystrix Fabricius, 1775: 777 (Musca). N. n. Musca pilosa Drury. Tachinidae, Archytas pilosus Drury.

iacobeae Panzer, 1805: 22 (Musca). Incosp. jacobeae Panzer. Tephritidae, Urophora stylata Fabricius. Name status by present revision.

icela Walker, 1849: 897 (Musca). New Zealand. T♀BMNH. Calliphoridae, Xeno-calliphora hortona Walker.

ichneumonea Linnaeus, 1758a: 593 (Musca). Europe. T A LSL. Psilidae, Loxocera ichneumonea Linnaeus.

ichneumonoides Geoffroy, 1785: 498 (Musca). France, Paris. T A Author.

idessa Walker, 1849: 908 (Musca). Ontario, St. Martin's Falls. HT Q BMNH. Muscidae, Graphomya idessa Walker. See Arntfield 1975: 282.

ieiuna Fabricius, 1787: 342 (Musca). India, Tranquebar. HT & UZMC. Calliphoridae, Bengalia ieiuna Fabricius. See Townsend 1931c: 371.

ignavus Harris, 1780: 154, pl. 45, fig. 91 (Musca). England. T Q Unknown. Muscidae, Hydrotaea ignava Harris.

ilerda Walker, 1849: 895 (Musca). (Ontario, St. Martin's Falls). T 2 BMNH. Calliphoridae, Cynomya cadaverina Robineau-Desvoidy.

iliaca Ratzeburg, 1840: 125 (Musca (Tachina)). Germany. T A UNKNOWN. Tachinidae.

illingworthi Patton, 1923b: 323 (Musca). Java, Buitenzorg. ST A BBM. Muscidae, Musca illingworthi Patton. See Pont 1990: 166 (STs also in Manchester Museum).

illucens Linnaeus, 1758a: 589 (Musca). South America. T A NRS. Stratiomyidae, Hermetia illucens Linnaeus.

illustratus Harris, 1780: 104, pl. 32, fig. 32 (Musca). England. T A Unknown. Syrphidae, Cheilosia illustrata Harris.

illustris Meigen, 1826: 54 (Musca). Germany. ST & ♀ NMW. Calliphoridae, Lucilia illustris Meigen. See Collin 1926: 258.

imbellis Harris, 1776: 60, pl. 15, fig. 16 (Musca). England. T A Unknown. Syrphidae, Chrysotoxum arcuatum Linnaeus.

impavida Rossi, 1790: 304 (*Musca*). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Calliphoridae, *Rhyncomya impavida* Rossi.

importuna Haliday, 1836: 149 (Musca). Ireland, Down, Holywood. T & NMI. Muscidae, Morellia hortorum Fallén.

impuncta Fallén, 1825: 79 (Musca). Sweden. LT & NRS. Muscidae, Helina impuncta Fallén. Lectotype designated by Pont 1984: 286.

inaequalis Geoffroy, 1785: 483 (Musca). France, Paris. T A Author. Syrphidae, Episyrphus cannabina Scopoli.

inanis Linnaeus, 1758a: 595 (Musca). Sweden. LT & LSL. Syrphidae, Volucella inanis Linnaeus. Lectotype designated by Thompson et al. 1982: 156.

inanis Fabricius, 1775: 763 (Syrphus). West Indies. T A UZMC F. Syrphidae, Copestylum brunneum Thunberg. Preocc. Linnaeus 1758.

inanis Fallén, 1825: 91 (Musca). Sweden, Skåne. LT & NRS. Muscidae, Achanthiptera rohrelliformis Robineau-Desvoidy. Preocc. Linnaeus 1758. Lectotype designated by Pont 1984: 287.

incerta Walker, 1853b: 334 (Musca). Columbia. HT Q BMNH. Calliphoridae, Sarconesia magellanica Le Guillou. See Dear 1979: 161.

incerta Patton, 1922b: 71 (Musca). India, Madras, Saidapet. LT ♂ BMNH. Muscidae, Musca pattoni Austen. Preocc. Walker 1853. Lectotype designated by Pont 1990: 166.

inconclusa Walker, 1860: 160 (Musca). Moluccas, Amboina. T & BMNH. Calliphoridae, Polleniopsis inconclusa Walker.

inconstans Wiedemann, 1830: 672 (Musca). Nomen nudum. Muscidae, Musca crassirostris Stein. Published without diagnosis or indication.

incurvata Bouché, 1834: 68 (Musca). Germany. TA UNKNOWN. Muscidae, Myospila meditabunda Fabricius.

inda Schrank, 1781: 438 (Musca). Austria, Vienna & Linz. T A Unknown. Stratiomyidae, Clitellaria ephippium Fabricius.

indica Walker, 1849: 880 (Musca). Subsequent Usage of Lucilia indica Robineau-Desvoidy. Muscidae, Neomyia indica Robineau-Desvoidy.

indica Awati, 1916b: 138 (Musca). India, Delhi, Kasauli & S. India. ST & CRIK. Muscidae, Musca planiceps Wiedemann. Preocc. Harris 1776.

indicus Harris, 1776: 47, pl. 11, fig. 77 (Musca). England. T A Unknown. Stratiomyidae, Sargus iridatus Scopoli.

inducta Walker, 1853b: 335 (Musca). East Indies. T♀BMNH. Calliphoridae, Lucilia papuensis Macquart.

inferior Stein, 1909: 213 (Musca). Java, Semarang. LT & ITZA. Muscidae, Musca inferior Stein. Lectotype designated by Pont 1970a: 89.

infixa Walker, 1856a: 25 (Musca). Singapore. T 

BMNH. Calliphoridae, Hypopygiopsis violacea Macquart.

inflata Turton, 1801: 637 (Musca). Subsequent Usage of Syrphus inflatus Fabricius. Syrphidae, Volucella inflata Fabricius.

ingens Walker, 1859b: 134 (Musca). Sulawesi, Makasar. T & BMNH. Calliphoridae, Catapicephala ingens Walker.

ingredior Harris, 1780: 140, pl. 41, fig. 33 (Musca). England. T & Unknown. Muscidae, Neomyia cornicina Fabricius. Name improperly formed (verb).

ingruo Harris, 1780: 144, pl. 42, fig. 53 (Musca). England. T A Unknown. Dolichopodidae, Sciapus sp. Name improperly formed (verb).

ingrus Harris, 1780: 143 (*Musca*). Incosp. *ingruo* Harris. Dolichopodidae, *Sciapus ingruo* Harris. Name status by present revision.

inscribens Walker, 1859b: 136 (Musca). Sulawesi, Makassar. T 

BMNH. Calliphoridae, Lucilia papuensis Macquart.

insignis Austen, 1909: 298, fig. 1 (Philaematomyia). India. LT & BMNH. Muscidae, Musca crassirostris Stein. Lectotype designated by Pont 1990: 166.

insularis Walker, 1853b: 340 (Musca). West Indies. T ♀ BMNH. Calliphoridae, Lucilia eximia Wiedemann.

intermedia Fallén, 1825: 87 (Musca). Sweden. LT & NRS. Muscidae, Coenosia intermedia Fallén. Lectotype designated by Pont 1984: 287.

intermedia Meigen, 1838: 306 (Musca). Subsequent Usage of Pollenia intermedia Macquart. Calliphoridae, Pollenia intermedia Macquart.

interpuncta Fallén, 1823: 63 (Musca). Nomen nudum. Muscidae, Helina impuncta Fallén. Published without diagnosis or indication. Mentioned under quadrimaculata, error for impuncta.

interpunctionis Ratzeburg, 1844: 170 (Musca). Germany. T A Unknown. Tachinidae.

interpunctus Harris, 1776: 59, pl. 15, fig. 13 (Musca). England. T \( \text{Y} \) Unknown. Syrphidae, Lejops interpunctus Harris.

interrupta Geoffroy, 1785: 482 (Musca). France, Paris. T A Author. Syrphidae.

interrupta Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Epistrophe eligans Harris. Preocc. Geoffroy 1785.

interrupta Walker, 1853b: 343 (Musca). Cape. HT & BMNH. Muscidae, Musca interruptella Pont. Preocc. Geoffroy 1785. See Pont 1990: 166.

interruptella Pont, 1980: 725 (Musca). N. n. Musca interrupta Walker. Muscidae, Musca interruptella Pont.

interruptus Poda, 1761: 118 (Conops). Austria, Graz. T A Unknown. Syrphidae, Eristalis interrupta Poda.

intersecta Geoffroy, 1785: 479 (Musca). France, Paris. T A Author. Syrphidae.

interventum Harris, 1780: 144, pl. 42, fig. 57 (Musca). England. T A Unknown. Rhinophoridae, Melanophora roralis Linnaeus.

interventus Harris, 1780: 145, pl. 42, fig. 60 (Musca). England. T A Unknown. Tachinidae.

intrahens Walker, 1859: 137 (Musca). Sulawesi, Makassar. T & BMNH. Muscidae, Neomyia timorensis Robineau-Desvoidy.

intricaria Linnaeus, 1758a: 592 (Musca). Sweden. LT Q LSL. Syrphidae, Eristalis intricaria Linnaeus. Lectotype designated by Thompson et al. 1982: 156.

intricata Turton, 1801: 638 (Musca). N. n. Musca intricaria Linnaeus. Syrphidae, Eristalis intricaria Linnaeus.

investigator Harris, 1776: 35, pl. 9, fig. 3 (Musca). England. T A Unknown. Tachinidae, Linnaemya vulpina? Fallén.

invisito Harris, 1780: 83, pl. 24, fig. 31 (*Musca*). England. T A Unknown. Syrphidae, *Sphaerophoria scripta* Linnaeus. Name improperly formed (verb).

ionia Meigen, 1975: 435, pl. 199, fig. 9 (Musca). Nomen nudum. Germany, probably Stolberg. Calliphoridae, Lucilia sp. Published after 1930 without a description.

iridata Scopoli, 1763: 340 (*Musca*). Carniola. T A DESTROY. Stratiomyidae, *Sargus iridatus* Scopoli.

irritans Harris, 1780: 148 (*Musca*). Subsequent Usage of *Conops irritans* Linnaeus. Muscidae, *Haematobia irritans* Linnaeus.

irritans Fallén, 1823: 62 (Musca). Sweden. LT & NRS. Muscidae, Hydrotaea irritans Fallén. Lectotype designated by Pont 1984: 287.

irwinrossi Zielke, 1974: 7 (Musca). Tanzania, Manyara Nat. Park, Res. Camp, Ndala River. HT & CAS. Muscidae, Musca xanthomelaena Wiedemann.

jacobeae Panzer, 1805: 22 (Musca). Germany. T A UNKNOWN. Tephritidae, Urophora stylata Fabricius.

jacobsoni Malloch, 1928: 334 (Byomya). Sumatra, Fort de Kock. HT & ITZA. Muscidae, Musca fletcheri Patton & Senior-White.

jamaicensis Gmelin, 1790: 2871 (Musca). N. n. Syrphus nigrita Fabricius. Syrphidae, Sterphus jamaicensis Gmelin.

japonica Thunberg, 1789: 90 (Musca). Japan. T A ZIU. Stratiomyidae, Ptecticus japonica Thunberg, N. Status

jeiuna Fabricius, 1794: 312 (Musca). emend. ieiuna Fabricius. Calliphoridae, Bengalia ieiuna Fabricius.

- jejuna Fabricius, 1805: 283 (Musca). emend. ieiuna Fabricius. Calliphoridae, Bengalia ieiuna Fabricius.
- jejuna Schrank, 1837: 17 (Musca). Austria, Gern. T A Unknown. Stratiomyidae, Oplodontha viridula Fabricius. Preocc. Fabricius 1787.
- joco Harris, 1780: 157, pl. 47, fig. 1 (Musca). England. T A Unknown. Dolichopodidae, Poecilobothrus nobilitatus Linnaeus.
- kasauliensis Awati, 1916b: 138 (Musca). India, Kasauli. ST ♂♀ CRIK. Muscidae, Musca ventrosa Wiedemann.
- kihuris Zielke, 1971c: 127 (Musca). Tanzania, Kihurio. ST ♂♀ UNKNOWN. Muscidae, Musca lusoria Wiedemann.
- kweilinensis Öuchi, 1938b: 31 (Musca). China, Kwangsi, Kweilin. HT & SIE. Muscidae, Musca conducens Walker.
- labiata Fabricius, 1787: 346 (*Musca*). Denmark, Copenhagen. T A UNKNOWN. Sarcophagidae, *Metopia labiata* Fabricius. See Pape 1986: 302.
- lacustris Scopoli, 1763: 343 (Musca). Carniola. T A DESTROY. Dolichopodidae, Orthoceratium lacustre Scopoli.
- laemica White, 1843: 291 (Musca). New Zealand. LT & BMNH. Calliphoridae, Calliphora stygia Fabricius. Lectotype designated by Dear 1985a: 25.
- laemica Walker, 1849: 906 (Musca). New Zealand (Lectotype) & Australia. LT ♀ BMNH. Calliphoridae, Calliphora stygia Fabricius. Preocc. White 1843. Lectotype designated by us here: LT of laemica White = LT of Walker.
- laeta Turton, 1801: 647 (Musca). Subsequent Usage of Syrphus laetus Fabricius. Syrphidae, Xanthogramma laeta Fabricius.
- laeta Fallén, 1823: 56 (Musca). Sweden, Skåne, Bäckaskog. LT 9 NRS. Muscidae, Phaonia laeta Fallén. Lectotype designated by Pont 1984: 287.
- lagyra Walker, 1849: 885 (Musca). Azores, Fayal. T ♀ BMNH. Calliphoridae, Lucilia sericata Meigen.
- lamed Schrank, 1781: 475 (Musca). Austria. T A Unknown. Otitidae, Otites lamed Schrank.
- lancifer Harris, 1780: 126, pl. 36, fig. 59 (*Musca*). England. T A Unknown. Anthomyidae, *Hydrophoria lancifer* Harris.
- laniaria Wiedemann, 1830: 683 (Musca, as macellaria var.). Brazil. T A Lost. Calliphoridae, Cochliomyia macellaria Fabricius. ST not found in ZMHU (Dear 1985a: 141).
- lanio Panzer, 1798a: 11 (Musca). Austria. T A ZMHU. Calliphoridae, Pollenia sp. lappae Cederhielm, 1798: 319 (Musca). USSR, Ingrica [= St. Petersburg Area]. T A UNKNOWN. Tephritidae, Terellia lappae Cederhielm.
- lappona Linnaeus, 1758a: 591 (Musca). Sweden. LT & LSL. Syrphidae, Sericomyia lappona Linnaeus. Lectotype designated by Thompson et al. 1982: 157.
- lar Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio lar Fabricius. Bombyliidae, Litorhina lar Fabricius.
- lardaria Fabricius, 1781: 436 (Musca). Germany. T A DESTROY. Muscidae, Polietes lardaria Fabricius. See Michelsen 1979a: 185.
- larvarum Linnaeus, 1758a: 596 (Musca). Europe. T A LSL. Tachinidae, Exorista larvarum Linnaeus.
- larvarum Scopoli, 1763: 331 (Musca). Carniola. ST L DESTROY. Tachinidae. Four varieties described, each from different Lepidopteran host.

larvata Lepechin, 1774: 310, pl. 20, fig. 2 (Musca). Nomen nudum. [Russia]. Published in non-binominal work.

larvata Schrank, 1781: 452 (*Musca*). Austria, Upper Austria, Eberspergae [= Ebersberg]. T A Unknown.

larvata Geoffroy, 1785: 475 (Musca). France, Paris. T A Author. Preocc. Schrank 1781.

larvata Gmelin, 1790: 2845 (Musca). USSR, Urals. T A Unknown. Preocc. Schrank 1781.

larvincola Ratzeburg, 1844: 173 (Musca). Germany. Tachinidae, Exorista larvarum Linnaeus.

larvipara Portschinsky, 1910: 29, fig. 30 (Musca). Southern Russia. ST ♂♀ ASL. Muscidae, Musca larvipara Portschinsky.

lasciua Fabricius, 1798: 564 (Musca). Cayenne. T A UZMC F. Micropezidae, Taeniaptera lasciva Fabricius.

lasiopa Villeneuve, 1936: 414 (*Musca*). Kenya, Mt Kenya. ST ♀ BMNH. Muscidae, *Musca lasiopa* Villeneuve. Syntypes also at MRAC. See Pont 1990: 166.

lasiophthalma Thomson, 1868: 548 (Musca). South Africa, Cape of Good Hope. T A NRS. Muscidae, Musca lasiophthalma Thomson.

lateralis Linnaeus, 1758a: 597 (Musca). Europe. LT & LSL. Fanniidae, Fannia canicularis Linnaeus. Suppressed by I.C.Z.N. 1969:124. Lectotype designated by Pont 1981: 170.

lateralis Fabricius, 1775: 778 (Musca). Germany. T A UZMC F. Tachinidae, Eriothrix rufomaculata De Geer. Preocc. Linnaeus 1758.

lateralis Geoffroy, 1785: 496 (Musca). Subsequent Usage of Musca lateralis Linnaeus. Fanniidae, Fannia canicularis Linnaeus.

lateralis Donovan, 1792: 69 (Musca). England. T A Author. Tachinidae, Eriothrix rufomaculata De Geer. Preocc. Linnaeus 1758. N. Syn.

lateralis Fabricius, 1805: 286 (Musca). South America. HT & UZMC. Tachinidae, Opsozelia discalis Townsend. Preocc. Linnaeus 1758. See Townsend 1931a: 96.

lateralis Fallén, 1817: 241 (Musca). Sweden, Skåne. T A NRS. Tachinidae, Thelaira nigrina Fallén. Preocc. Linnaeus 1758.

lateralis Macquart, 1834: 158 (Musca). France, Lille. T♀ MHNL. Muscidae, Musca domestica Linnaeus. Preocc. Linnaeus 1758.

lateritia Schrank, 1796: 129 (Musca). T A UNKNOWN.

laternaria Müller, 1776: 174 (Musca). Denmark. TA Author. Syrphidae, Leucozona laternaria Müller.

laticornis Fallén, 1825: 86 (Musca). Sweden, Skåne. HT ? ZIL. Anthomyiidae, Pegomya laticornis Fallén. See Michelsen 1983: 113.

laticornis Zetterstedt, 1837: 42 (Musca). Nomen nudum. [Sweden, Bottnia occidentalis, Muonioniska]. T ? ZIL. Calliphoridae, Calliphora genarum Zetterstedt.

laticornis Zetterstedt, 1838: 658 (Musca). Sweden, Bottnia occidentalis, Muonioniska. LT & ZIL. Calliphoridae, Calliphora genarum Zetterstedt. Preocc. Fallén 1825. Lectotype designated by Rognes 1986: 352.

latifrons Fallén, 1817: 238 (*Musca*). Sweden, Skåne, Äsperöd. LT & NRS. Sarcophagidae, *Sarcophila latifrons* Fallén. Lectotype designated by Pape 1986: 305.

latifrons Wiedemann, 1830: 656 (Musca). China, Macao. LT 9 NMW. Muscidae, Musca vetustissima Walker. Preocc. Fallén 1817. Lectotype designated by Pont 1973: 148.

latiparafrons Awati, 1916b: 138 (Musca). India. ST Q CRIK. Muscidae, Musca convexifrons? Thomson.

latipes Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

latrinarum De Geer, 1776: 31, pl. 1, fig. 15 (Musca). N. n. Musca serrata Linnaeus. Heleomyzidae, Heleomyza serrata Linnaeus.

latro Fabricius, 1787: 349 (Musca). Europe. T A UZMC F.

lauta Wiedemann, 1830: 410 (Musca). Java. LT P NMW. Muscidae, Neomyia lauta Wiedemann. Lectotype designated by Pont 1973: 192 (Townsend (1931c: 369) HT designation invalid).

leneatus Harris, 1780: index (Musca). Missp. lineatus Harris. Syrphidae, Eristalis lineata Harris.

lenio Harris, 1780: 147, pl. 43, fig. 66 (Musca). England. T A Unknown. Anthomyidae, Hydrophoria linogrisea Meigen. Name improperly formed (verb).

lenis Harris, 1780: 154, pl. 45, fig. 88 (Musca). England. T A Unknown. Anthomyidae.

leonina Fabricius, 1775: 776 (Musca). Australia. HT & BMNH B. Calliphoridae, Amenia leonina Fabricius. See Townsend 1931c: 374 (HT in Kiel!); Crosskey 1965: 112.

leontodontis De Geer, 1776: 46, pl. 2, fig. 18 (Musca). N. n. Musca hyoscyami Linnaeus. Tephritidae, Tephritis hyoscyami Linnaeus.

lepida Fallén, 1825: 76 (Musca). Subsequent Usage of Anthomyia lepida Wiedemann. Fanniidae, Fannia lepida Wiedemann.

lepidus Harris, 1780: 121, pl. 35, fig. 40 (Musca). England. T A Unknown. Chloropidae, Chlorops lepidus Harris. N. Status

leporinus Harris, 1780: 117, pl. 34, fig. 23 (Musca). England. T A Unknown. Acalyptrate.

leprae Linnaeus, 1758a: 598 (Musca). America. T A LSL.

leptogaster Panzer, 1798a: 19 (Musca). Austria. T A ZMHU. Psilidae, Chyliza leptogaster Panzer.

leucocephala de Villers, 1789a: 550, pl. 10, fig. 11 (*Musca*). France, Cevennes Mts. T A Author. Sarcophagidae.

leucocephala Gmelin, 1790: 2878 (Musca). Europe. T A NMI. Syrphidae, Eristalinus aeneus Scopoli. Preocc. de Villers 1789.

leucocephala Rossi, 1790: 306 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU.
Sarcophagidae, Metopia argyrocephala Meigen. Preocc. de Villers 1789.

leucocephala Walker, 1853b: 339 (Musca). Senegal? T ♀ BMNH. Calliphoridae, Hemipyrellia fernandica Macquart. Preocc. de Villers 1789.

leucomelas Wiedemann, 1824: 48 (*Musca*). South Africa, Cape of Good Hope. T Q UZMC. Muscidae, *Graphomya leucomelaena* Wiedemann.

leuconyx Rossi, 1794: 65 (Musca). Italy, "Etruria". T A ZMHU.

leucopa Linnaeus, 1767: 983 (Musca). America. T A LSL. Stratiomyidae, Hermetia illucens Linnaeus. 1 sp. in LSL (Dear MS).

leucophaeus Harris, 1782: 74 (Musca). Missp. lucophaeus Harris.

leucopis Gmelin, 1790: 2860 (*Musca*). Europe. T A NMI. leucoptera Gmelin, 1790: 2861 (*Musca*). Europe. T A NMI.

leucoptera von Roser, 1840: 58 (Musca). Germany, Württemberg. T A SMN.

Calliphoridae, *Pollenia* sp. Preocc. Gmelin 1790. leucosticta Gmelin, 1790: 2860 (*Musca*). Non-European. T A NMI.

leucozona Panzer, 1806: 19 (Musca). Germany. T A UNKNOWN. Tachinidae, Thelaira leucozona Panzer.

levidus Harris, 1780: 124, pl. 36, fig. 52 (Musca). England. T A Unknown. Muscidae, Muscina levida Harris.

libatrix Scopoli, 1763: 346 (Musca). Carniola. T A DESTROY. Syrphidae.

libatrix Geoffroy, 1785: 498 (Musca). France, Paris. T A Author. Preocc. Scopoli 1763.

libatrix Panzer, 1798a: 12 (Musca). Austria. T A ZMHU. Tachinidae, Zenillia fulva Fallén. Preocc. Scopoli 1763. N. Syn.

liberia Snyder, 1951: 2 (Musca). Liberia, Robertsport, Near Bendu Village. HT & AMNH. Muscidae, Musca liberia Snyder.

ligurriens Wiedemann, 1830: 655 (Musca). China & Java. ST & UZMC NMW. Calliphoridae, Hemipyrellia ligurriens Wiedemann.

lilaea Walker, 1849: 894 (Musca). (Ontario, St. Martin's Falls). T Q BMNH. Calliphoridae, Cynomya cadaverina Robineau-Desvoidy.

limatus Harris, 1780: 122, pl. 36, fig. 45 (Musca). England. T A Unknown. Tephritidae.

limbata Gmelin, 1790: 2853 (Musca). N. n. Musca marginata Fabricius. Sciomyzidae, Coremacera marginata Fabricius.

limbata Manuel, 1811: 31 (Musca). Subsequent Usage of Musca limbata Gmelin. Sciomyzidae, Coremacera marginata Fabricius.

lincensis Schrank, 1776: 96, pl. 3, fig. 20 (Musca). Austria, Linz. T A Unknown. Tephritidae.

lindneri Paterson, 1956: 158, fig. 2 (Musca). Tanzania, Ngerengere. HT & SMN. Muscidae, Musca lindneri Paterson.

lineata Fabricius, 1775: 754 (Tipula). England. T A BMNH. Keroplatidae, Cerotelion striatus Gmelin. N. Syn.

lineata Fabricius, 1781: 453 (Musca). Germany. T A UZMC F. Chloropidae, Chlorops pumilionis Bjerkander. Preocc. Harris 1776.

lineata Geoffroy, 1785: 485 (Musca). France, Paris. T A Author. Syrphidae, Eumerus strigatus Fallén. Preocc. Harris 1776. N. Comb.

lineata Turton, 1801: 620 (Musca). Subsequent Usage of Musca lineata Fabricius. Chloropidae, Chlorops punilionis Bjerkander.

lineata Fallén, 1817: 238 (Musca). Sweden, Skåne, Bäckaskog. LT & NRS. Sarcophagidae, Blaesoxipha plumicornis Zetterstedt. Preocc. Harris 1776. Lectotype designated by Pape 1986: 305.

lineata Brunetti, 1910: 91, pl. 8, fig. 19 (*Pristirhynchomyia*). India, W Bengal, Calcutta. ST ♀ ZSI. Muscidae, *Musca conducens* Walker. ST also in BMNH (Pont 1990: 167).

lineatus Harris, 1776: 42, pl. 10, fig. 4 (*Musca*). England. T A Unknown. Syrphidae, *Eristalis lineata* Harris.

lineola Turton, 1801: 634 (Musca). Subsequent Usage of Rhagio lineola Fabricius. Rhagionidae, Rhagio lineola Fabricius.

lineolae Harris, 1776: 58, pl. 15, fig. 10 (Musca). England. T A Unknown. Syrphidae, Eristalis interrupta Poda.

lineolata Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Chrysogaster cemiteriorum Linnaeus.

lingens Meigen, 1975: 452, pl. 270, fig. 5 (Musca). Nomen nudum. Germany, probably Stolberg. Tachinidae, Strongygaster globula Meigen. Published after 1930 without a description.

linzensis Gmelin, 1790: 2863 (Musca). Emend. lincensis Schrank. Tephritidae.

liris Walker, 1849: 882 (*Musca*). Australia (?Tasmania). HT \$\Pi\$ BMNH. Tachinidae, *Rutilia liris* Walker. See Crosskey 1973a: 136.

lithophila Germar, 1839: 222 (*Musca*). Germany, Bavaria, Solenhofen [Jurassic]. T X UNKNOWN. Blattariae, *Mesoblattina lithophila* Germar.

litorea Fallén, 1823: 63 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Spilogona litorea Fallén. Lectotype designated by Pont 1984: 288.

liturariae Ratzeburg, 1844: 170 (Musca). Germany. T A Unknown. Anthomyiidae, Delia antiqua Meigen.

liturata Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

litus Harris, 1780: 119, pl. 35, fig. 32 (Musca). England. T A Unknown. Anthomyiidae, Anthomyia pluvialis Linnaeus.

livens Fabricius, 1794: 345 (Musca). Denmark. T A UZMC. Scathophagidae, Hydromyza livens Fabricius.

longerro Harris, 1780: 152, pl. 45, fig. 79 (Musca). England. T A Unknown. Psilidae. longervo Harris, 1780: 74 (Musca). Incosp. longerro Harris. Psilidae. Name status by present revision.

longicornis Fabricius, 1775: 783 (Musca). America. LT & UZMC F. Dolichopodidae, Condylostylus longicornis Fabricius. Lectotype designated by Bickel in press. longicornis Fabricius, 1781: 420 (Rhagio). Germany. T A UZMC F. Keroplatidae,

Macrocera macrocera Gmelin. N. Status

longicornis Geoffroy, 1785: 477 (Musca). France, Paris. T A Author. Tephritidae. Preocc. Fabricius 1775; synonym of Musca lincensis Schrank.

longicornis de Villers, 1789a: 538 (Musca). N. n. Musca lincensis Schrank. Tephritidae, Genus? lincensis Schrank. Preocc. Fabricius 1775.

longipennis Fabricius, 1794: 323 (Musca). Germany. T A UZMC F. Lauxaniidae, Minettia longipennis Fabricius.

longipes Scopoli, 1763: 336 (Musca). Carniola. T A DESTROY.

longipes Geoffroy, 1785: 497 (Musca). France, Paris. T A Author. Preocc. Scopoli 1763.

longipes Fabricius, 1787: 348 (Musca). Cayenne. T A UZMC F. Micropezidae, Cardiacephala guttata Walker. Preocc. Scopoli 1763.

longipes Thunberg, 1791: 127 (Musca). N. n. Musca femorata Linnaeus. Syrphidae, Chalcosyrphus femoratus Linnaeus. Preocc. Scopoli 1763.

longipes Fabricius, 1805: 298 (Musca). South America. HT & UZMC. Tachinidae,
 Cholomyia acromion Wiedemann. Preocc. Scopoli 1763. See Townsend 1931a:
 93.

longipes Presl, 1822: 206 (Musca). Ligurian Prussian Amber. T A Unknown. Preocc. Scopoli 1763.

longipes Stephens, 1829b: 302 (*Musca*). England. Tachinidae. Published in synonymy, not subsequently validated by usage. Published in synonymy with *Dexia rustica* Fabricius.

longipes Paterson, 1957: 106, fig. 2 (Musca). Botswana, Martin's Drift. HT & SAIMR. Muscidae, Musca hugonis Pont. Preoce. Scopoli 1763.

longisco Harris, 1780: 83, pl. 24, fig. 30 (*Musca*). England. T A Unknown. Syrphidae, *Xylota sylvarum* Linnaeus. Name improperly formed (verb).

longula Fallén, 1824: 72 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Subhylemyia longula Fallén. Lectotype designated by Michelsen 1983: 114.

lothari Zielke, 1974: 9 (Musca). Kenya, 26 Miles SW Nairobi. HT & CAS. Muscidae, Musca xanthomelaena Wiedemann.

lucens Villeneuve, 1922: 336 (Pristirynchomyia). Ceylon, Kandy. ST & UN-KNOWN. Muscidae, Musca conducens Walker.

lucida Scopoli, 1763: 347 (Musca). Carniola. T A DESTROY. Syrphidae, Chrysogaster lucida Scopoli.

lucidula Loew, 1856: 48 (Cyrtoneura). Egypt, El Tûr. T 

NMW. Muscidae, Musca lucidula Loew.

lucifer Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio lucifer Fabricius. Bombyliidae, Poecilanthrax lucifer Fabricius.

lucophaeus Harris, 1780: 74, pl. 21, fig. 3 (Musca). England. T A Unknown. Scathophagidae, Scathophaga scybalaria Linnaeus.

lucopheus Harris, 1780: 74, pl. 21, fig. 3 (Musca). Incosp. lucophaeus Harris. Scathophagidae, Scathophaga scybalaria Linnaeus. Name status by present revision.

lucorum Linnaeus, 1758a: 592 (Musca). Sweden. LT & LSL. Syrphidae, Leucozona lucorum Linnaeus. Lectotype designated by Thompson et al. 1982: 157.

lucorum Houttuyn, 1768: 488 (Musca). Subsequent Usage of Musca lucorum Linnaeus. Syrphidae, Leucozona lucorum Linnaeus.

lucorum Fallén, 1823: 55 (Musca). Sweden. LT & NRS. Muscidae, Helina evecta Harris. Preocc. Linnaeus 1758. Lectotype designated by Pont 1984: 288.

lucozona Sherborn, 1922: 3688 (Musca). Missp. leucozona Panzer. Tachinidae, Thelaira leucozona Panzer.

luctuosa Schrank, 1803: 122 (Musca). Germany, Bavaria, Ingolstadt. T A Unknown. ludeus Harris, 1780: 157, pl. 47, fig. 3 (Musca). England. T A Unknown. Dolichopodidae, Argyra diaphana Fabricius.

ludicrous Harris, 1780: index (Musca). Incosp. ludicrus Harris. Dolichopodidae, Poecilobothrus nobilitatus Linnaeus. Name status by present revision.

ludicrus Harris, 1780: 157, pl. 47, fig. 2 (Musca). England. T A Unknown. Dolichopodidae, Poecilobothrus nobilitatus Linnaeus.

ludifacies Robineau-Desvoidy, 1863: 621 (Musca). France, Paris. T A DESTROY.
Muscidae, Musca autumnalis De Geer.

ludifica Fabricius, 1794: 323 (Musca). Germany, Kiel. LT & UZMC F. Muscidae, Musca autumnalis De Geer. Lectotype designated by Michelsen 1979a: 186.

lugens Fabricius, 1787: 350 (Musca). Sierra Leone. T A UZMC F. Platystomatidae, Engistoneura lugens Fabricius.

lugubris Fabricius, 1775: 770 (Syrphus). Denmark. T A UZMC F. Syrphidae, Pipiza lugubris Fabricius.

lugubris Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio lugubris Fabricius.
Therevidae, Thereva lugubris Fabricius.

lunata Turton, 1801: 645 (Musca). Subsequent Usage of Syrphus lunatus Fabricius. Syrphidae, Eunerus lunatus Fabricius.

lunata Fabricius, 1805: 292 (*Musca*). Madeira. LT & UZMC. Calliphoridae, *Stomorhina lunata* Fabricius. See Townsend 1931c: 372. Lectotype designated by Rognes 1991a: 245.

lunula de Villers, 1789a: 433, pl. 9, fig. 16 (Musca). Europe. T A Author. Syrphidae, Eristalis pertinax Scopoli.

lupina Swederus, 1787: 289 (Musca). New Zealand. T A BMNH B. Tachinidae, Bothrophora lupina Swederus.

lupulina Fabricius, 1787: 344 (Musca). Denmark, Zealand. T A UZMC. Lauxaniidae, Minettia lupulina Fabricius.

lurida Fabricius, 1781; 441 (Musca). Germany. T A UZMC F. Tachinidae, Servillia lurida Fabricius.

lusoria Wiedemann, 1824: 47 (Musca). South Africa, Cape of Good Hope. T る UZMC. Muscidae, Musca lusoria Wiedemann.

lustrator Harris, 1780: 148, pl. 43, fig. 72 (Musca). England. T A Unknown. Fanniidae, Fannia lustrator Harris.

lutaria Fabricius, 1794: 344 (Musca). Germany, Kiel. T A UZMC F. Scathophagidae, Scathophaga lutaria Fabricius.

lutea Gmelin, 1790: 2843 (Musca). Europe. T A NMI. Preocc. Harris 1780.

luteipennis Zetterstedt, 1845: 1325 (Musca). Nomen nudum. Muscidae, Pyrellia rapax Harris. Published in synonymy, not subsequently validated by usage. Proposed in synonymy with aenea Zetterstedt.

luteola Scopoli, 1763: 349 (Musca). Carniola. T A DESTROY. Chyromyidae, Chyromya flava Linnaeus.

luteola Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Myolepta dubia Fabricius. Preocc. Scopoli 1763.

luteola Fabricius, 1805: 286 (Musca). Guinea. T A UZMC. Calliphoridae, Auchmeromyia senegalensis Macquart. Preocc. Scopoli 1763.

luteus Harris, 1780: 116, pl. 34, fig. 16 (Musca). England. T A Unknown. Psilidae. lychnidis Fabricius, 1787: 353 (Musca). Germany, Kiel. T A UZMC F. Tephritidae, Myoleja caesio Harris.

lyra Harris, 1776: 42, pl. 10, fig. 5 (Musca). England. T A Unknown. Syrphidae, Eristalis lyra Harris.

byrcea Walker, 1849: 873 (Musca). Uruguay, Montevideo. LT ♂ BMNH. Calliphoridae, Compsomyiops fulvicrura Robineau-Desvoidy. Lectotype designated by Dear 1985b: 148.

macellaria Fabricius, 1775: 776 (Musca). "America". HT Q UZMC F. Calliphoridae, Cochliomyia macellaria Fabricius. See Townsend 1931a: 70; Dear 1985b: 140.

macellaria Haliday, 1833: 165 (Musca). Ireland, Down, Holywood. T A NMI. Calliphoridae, Pollenia sp. Preocc. Fabricius 1775. N. Comb.

macrocephala Harris, 1780: 82 (Musca). Subsequent Usage of Conops macrocephala Linnaeus. T A Unknown. Syrphidae, Rhingia campestris Meigen. Misidentification.

macrocephala Rossi, 1794: 72 (Musca). Italy. T A ZMHU. Preocc. Harris 1780. macroceras Gmelin, 1790: 2866 (Musca). N. n. Rhagio longicornis Fabricius. Keroplatidae, Macrocera macroceras Gmelin. N. Comb.

macrophthalma Preyssler, 1791: 68, pl. 2, fig. 6 (Musca). Czechoslovakia, Bohemia. T A DESTROY. Syrphidae, Eristalinus aeneus Scopoli. See Rozkosny, Chvála & Pont 1982: 352.

mactans Fabricius, 1787: 344 (Musca). Cayenne. T A UZMC F.

macularis Walker, 1858b: 104 (*Musca*). Moluccas, Aru Islands. LT & BMNH. Calliphoridae, *Paramenia macularis* Walker. Lectotype designated by Crosskey 1965: 131 (HT designation Townsend 1931c: 375).

maculata Scopoli, 1763: 326 (Musca). Carniola. T A DESTROY. Muscidae, Gra-

phomya maculata Scopoli.

maculata Harris, 1780: 140, pl. 41, fig. 37 (Musca). England. T 9 Unknown. Muscidae, Graphomya maculata Scopoli. Preoce. Scopoli 1763.

maculata de Villers, 1789a: 418 (Musca). Subsequent Usage of Nemotelus maculatus De Geer. Rhagionidae, Rhagio maculatus De Geer.

maculata de Villers, 1789a: 433 (Musca). Subsequent Usage of Volucella maculata Geoffroy.

maculata Meigen, 1804: 294 (Atherix). Germany. T & MNHNP. Athericidae, Atherix ibis Fabricius.

maculatus Fabricius, 1781: 420 (Rhagio). Germany. T A UZMC F.

major larvarum De Geer, 1776: 24 (*Musca*). *Nomen nudum*. N. n. *Musca larvarum* Linnaeus. Tachinidae, *Exorista larvarum* Linnaeus. Not available; polynominal, not binominal.

malaisei Emden, 1965: 91, fig. 2 (Musca). Burma, Kambaiti. HT ♂ NRS. Muscidae, Musca malaisei Emden.

malansi Stein, 1857: 106 (Musca). Nomen nudum. Switzerland, Graubünden. Calliphoridae.

mallochi Thompson & Pont, 1992: (Musca). N. n. Musca squamata Malloch. Muscidae, Musca mallochi Thompson & Pont. N. Name

manicata Fabricius, 1794: 334 (Musca). France. HT & MNHNP. Ephydridae, Ochthera manicata Fabricius. See Claussen 1977: 511.

mano Harris, 1780: 142, pl. 42, fig. 45 (Musca). England. T & Unknown. Muscidae, Eudasyphora cyanella Meigen. Name improperly formed (verb).

mantes Harris, 1780: 148, pl. 43, fig. 73 (Musca). England. T A Unknown. Muscidae, Drymeia vicana Harris.

mantis De Geer, 1776: 143, pl. 8, fig. 17 (Musca). Sweden, Stockholm. NT & NRS. Ephydridae, Ochthera mantis De Geer. Neotype designation (Claussen 1977: 514).

mantos Harris, 1780: 148 (Musca). Incosp. mantes Harris. Muscidae, Drymeia vicana Harris. Name status by present revision.

marginalis Geoffroy, 1785: 497 (Musca). France, Paris. T A Author. Suppressed by I.C.Z.N. 1988: 236.

marginalis Fallén, 1824: 66 (Musca). Sweden, Västergötland, Kinneskogen. LT & NRS. Muscidae, Spilogona marginifera Hennig. Preocc. Geoffroy 1785. Suppressed by I.C.Z.N. 1988: 236. Lectotype designated by Pont 1984: 289.

marginalis Wiedemann, 1830: 395 (Musca). South Africa, Nubia, Arabia. ST A UZMC NMW. Calliphoridae, Chrysomya marginalis Wiedemann. Conserved by

I.C.Z.N. 1988: 236.

marginata Fabricius, 1775: 761 (Stratiomys). England. TA BMNHB. Stratiomyidae, Nemotelus pantherinus Linnaeus.

marginata Fabricius, 1775: 784 (Musca). Germany, Saxony. T A UZMC F. Sciomyzidae, Coremacera marginata Fabricius.

marginella Gmelin, 1790: 2836 (Musca). N. n. Stratiomys marginata Fabricius. Stratiomyidae, Nemotelus pantherinus Linnaeus.

marginella Estlund, 1796: 131 (Musca). Sweden. T A UNKNOWN. Preocc. Gmelin 1790.

marginifera Walker, 1858b: 105 (Musca). Aru Islands. T  $\circ$  BMNH. Calliphoridae, Lucilia papuensis Macquart.

maritima Scopoli, 1763: 344 (Musca). Yugoslavia, Tergestum. T A DESTROY. Syrphidae, Xylota segnis Linnaeus.

marmorata Geoffroy, 1785: 474 (Musca). France, Paris. T A Author.

marmorata Fabricius, 1805: 300 (Musca). Germany. T A MNHNP. Tachinidae, Lespesia vertiginosa Fallén. Preocc. Geoffroy 1785. N. Comb.

maronea Walker, 1849: 886 (Musca). Australia. HT 9 BMNH. Muscidae, Neomyia australis Macquart. See Pont 1973: 203.

marsya Walker, 1849: 890 (Musca). Cape. HT & BMNH. Muscidae, Pyrellina marsya Walker. See Pont 1973: 287.

martia Scopoli, 1763: 327 (Musca). Carniola. T A DESTROY. Sarcophagidae.

maura Linnaeus, 1758a: 590 (Musca). Europe. T A LSL. Bombyliidae, Hemipenthes maurus Linnaeus. 1 sp. in LSL (Dear MS).

maura Turton, 1801: 634 (Musca). N. n. Rhagio morio Fabricius. Sciaridae, Bradysia forcipata Fabricius. Preocc. Linnaeus 1758.

maura Fabricius, 1805: 302 (Musca). Barbaria [= Morocco: Tangiers]. LT & UZMC F. Sarcophagidae, Nyctia halterata Panzer. Preocc. Linnaeus 1758. Lectotype designated by Pape 1986: 302 (also Townsend 1931c: 382).

mazaca Walker, 1849: 889 (Musca). South Africa, Cape of Good Hope. T ♀ BMNH. Muscidae, Neomyia peronii Robineau-Desvoidy.

mediana Wiedemann, 1830: 657 (Musca). China, Macao. LT ♂ NMW. Muscidae, Musca sorbens Wiedemann. Lectotype designated by Pont 1973: 288.

meditabunda Fabricius, 1781: 444 (Musca). Italy & Denmark, Copenhagen. LT Q UZMC F. Muscidae, Myospila meditabunda Fabricius. Lectotype designated by Michelsen 1979a: 186.

meditalnenda Gmelin, 1790: 2845 (Musca). N. n. Musca meditabunda Fabricius. Muscidae, Myospila meditabunda Fabricius.

meditata Fallén, 1825: 87 (Musca). Sweden. LT & NRS. Muscidae, Macrorchis meditata Fallén. Lectotype designated by Pont 1984: 289.

megacephala Fabricius, 1794: 317 (Musca). Guinea. T A UZMC F. Calliphoridae, Chrysomya megacephala Fabricius.

melancholica Turton, 1801: 648 (Musca). Subsequent Usage of Syrphus melancholica Fabricius. Syrphidae, Merodon natans Fabricius.

melanius Harris, 1776: 59, pl. 15, fig. 12 (Musca). England. T A Unknown. Syrphidae, Eristalinus sepulchralis Linnaeus.

melanochrysa Gmelin, 1790: 2862 (Musca). Europe. T A NMI.

melanochrysa Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Xylota segnis Linnaeus. Preocc. Gmelin 1790: 2862.

melanopis Gmelin, 1790: 2836 (Musca). Europe. T A NMI. Stratiomyidae.

melanopis Turton, 1801: 631 (Musca). Subsequent Usage of Musca melanopis Gmelin. Stratiomyidae.

melanoptera Gmelin, 1790: 2833 (Musca). Non-European. T A NMI. Bombyliidae. melanoptera Fallén, 1817: 253 (Musca). Sweden, Östergotland & Västergötland. T

A NRS. Calliphoridae, *Morinia doronici* Scopoli. Preocc. Gmelin 1790. N. Syn. As this name is preoccupied and must be replaced, we prefer to use the oldest

As this name is preoccupied and must be replaced, we prefer to use the oldest probable name for the taxon (Schiner 1856: 412). Specialists should select a neotype for *Morinia doronici* (Scopoli) to fix this interpretation.

melanopyrrha Forster, 1770: 15 (Musca). Nomen nudum. Britain. Syrphidae, Volucella bombylans Linnaeus. Published without diagnosis or indication.

melanopyrrha Forster, 1771: 98 (Musca). England & Germany. T A LSL. Syrphidae, Volucella bombylans Linnaeus. See Day & Fitton 1977.

melanura Schrank, 1781: 457 (Musca). Austria, Linz. T A Unknown.

melanura Turton, 1801: 603 (Musca). Subsequent Usage of Musca melanura Schrank.

melinus Harris, 1780: 74 (Musca). Incosp. mellinus Harris. Dryomyzidae. Name status by present revision.

mellina Linnaeus, 1758a: 594 (Musca). Sweden. ST & LSL. Syrphidae, Melanostoma mellinum Linnaeus. See Thompson et al. 1982: 157.

mellina Harris, 1780: 80, pl. 24, fig. 22 (Musca). England. T A Unknown. Syrphidae, Scaeva pyrastri Linnaeus. Preocc. Linnaeus 1758.

mellinus Harris, 1780: 74, pl. 21, fig. 4 (Musca). England. T A Unknown. Dryomyzidae. Preocc. Linnaeus 1758.

menthastri Linnaeus, 1758a: 594 (Musca). Sweden. ST ? LSL. Syrphidae, Sphaero-phoria menthastri Linnaeus. See Thompson et al. 1982: 157.

merdaria Fabricius, 1794: 344 (Musca). Germany, Kiel. T A UZMC F. Scathophagidae, Scathophaga stercoraria Linnaeus.

meridiana Linnaeus, 1758a: 595 (Musca). Europe. HT & LSL. Muscidae, Mesembrina meridiana Linnaeus. See Pont 1981: 170.

meridiana Bloch, 1776: 184, pl. 5, fig. 24 (Musca). Subsequent Usage of Musca meridiana Linnaeus. Muscidae, Mesembrina meridiana Linnaeus.

meruensis Zielke, 1973: 368 (Musca). Tanzania, Mt. Meru. HT & CNC. Muscidae, Musca meruensis Zielke.

merulina Scopoli, 1763: 344 (*Musca*). Carniola. T A DESTROY. Syrphidae, *Cheilosia* sp.

mesembrinoides Walker, 1861b: 244 (Musca). New Guinea, Dorey. T & BMNH. Calliphoridae, Onesia obscurata Walker.

mesoleuca Lichtenstein, 1796: 216 (Musca). Sinai. T A Auction.

mesopotamiensis Patton, 1920: 770, pl. 69 (Musca). Iraq, Euphrates & Tigris Rivers. ST A UNKNOWN. Muscidae, Musca larvipara Portschinsky. See Pont 1990: 167.

metallina Gmelin, 1790: 2874 (Musca). Subsequent Usage of Syrphus metallinus Fabricius. Syrphidae, Lejogaster metallina Fabricius.

metallina Gravenhorst, 1807: 378 (Musca). Unknown, probably Germany. T A Lost. Tachinidae.

meteorica Linnaeus, 1758a: 597 (Musca). Europe. T A Lost. Muscidae, Hydrotaea meteorica Linnaeus. See Pont 1981:171.

meteorica Schrank, 1781: 464 (Musca). Subsequent usage of Musca meteorica Linnaeus. Muscidae, Hydrotaea meteorica Linnaeus.

meticulosa Scopoli, 1763: 344 (*Musca*). Carniola. T A DESTROY. Syrphidae, *Neoascia meticulosa* Scopoli. See Thompson 1981b: 475.

- metilia Walker, 1849: 898 (Musca). Nepal. T & BMNH. Calliphoridae, Lucilia papuensis Macquart.
- metus Harris, 1780: 114, pl. 33, fig. 27 (Musca). England. TA Unknown. Tachinidae. micans Turton, 1801: 637 (Musca). Subsequent Usage of Syrphus micans Fabricius. Syrphidae, Volucella inanis Linnaeus.
- micans Fabricius, 1805: 291 (Musca). India Orientali. HT A UZMC. Calliphoridae, Catapicephala micans Fabricius. See Townsend 1931c: 375.
- micans Meigen, 1838: 303 (Musca). N. n. Calliphora rufipalpis Macquart. Calliphoridae, Onesia floralis Robineau-Desvoidy. Preocc. Fabricius 1805.
- microleon Linnaeus, 1758a: 589 (*Musca*). Europe. T A LSL. Stratiomyidae, *Odontomyia microleon* Linnaeus. 2 sp. in LSL (Dear MS).
- miliaria Schrank, 1781: 476 (Musca). Austria, Vienna, Prater. T A Unknown. Tephritidae, Xyphosia miliaria Schrank.
- minima Zetterstedt, 1837: 42 (Musca). Nomen nudum. [Sweden, Marklin]. T A ZIL. Calliphoridae, Melanomya nana Meigen.
- minima Zetterstedt, 1838: 654 (Musca). Sweden, Marklin. LT & ZIL. Calliphoridae, Melanomya nana Meigen. Preocc. Harris 1780. Lectotype designated by Rognes 1991a: 199.
- minima Rondani, 1868: 52 (Musca). Italy, Parma. T Q USB. Muscidae, Musca tempestiva Fallén. Preocc. Harris 1780.
- minimus Harris, 1780: 87 (Musca, as vomitor minimus). England. T A Unknown. Calliphoridae, Calliphora vomitoria Linnaeus.
- minimus Harris, 1780: index, pl. 35, fig. 43 (*Musca*, as *vibrans* minimus). England. T A UNKNOWN.
- minor Harris, 1780: 153, pl. 45, fig. 83 (Musca, as socio). England. T A Unknown. Fanniidae, Fannia canicularis Linnaeus.
- minor Turton, 1801: 655 (Musca). N. n. Musca pusillus Fabricius. Stratiomyidae, Oplodontha minuta Fabricius. Preocc. Harris 1780.
- minor Macquart, 1851: 226 (Musca). Tasmania. LT & MNHNP. Muscidae, Musca domestica Linnaeus. Preoce. Harris 1780. Lectotype designated by Pont 1967: 187.
- minor domestica De Geer, 1776: 26 (Musca). Nomen nudum. [Sweden]. T A NRS. Fanniidae, Fannia scalaris Fabricius. Not available; polynominal, not binominal.
- minor larvarum De Geer, 1776: 25 (*Musca*). *Nomen nudum*. [Sweden]. T A NRS. Tachinidae. Not available; polynominal, not binominal.
- minuta Fabricius, 1787: 353 (Musca). Germany, Kiel. T A UZMC F. Chloropidae, Meromyza saltatrix Linnaeus. Preocc. Harris 1780.
- minuta Fabricius, 1794: 268 (Stratiomys). India, Tranquebar. T A UZMC F. Stratiomyidae, Oplodontha minuta Fabricius. N. Comb.
- minuta Awati, 1916b: 138 (Musca). India, Delhi. ST Q CRIK. Muscidae, Musca confiscata Speiser. Preocc. Harris 1780.
- minutior Turton, 1801: 631 (Musca). N. n. Stratiomyia minuta Fabricius. Stratiomyidae, Oplodontha minuta Fabricius.
- minutissima de Razoumowsky, 1789: 230 (Musca). Switzerland, Jorat. T A UN-KNOWN.
- minutus Harris, 1780: 74, pl. 21, fig. 7 (Musca). England. T A Unknown. Pallopteridae.
- mirabilis Guérin-Méneville, 1838: 296 (Musca). Subsequent Usage of Rutilia mirabilis Guérin-Méneville. Tachinidae, Formosia mirabilis Guérin-Méneville.

modesta de Meijere, 1904: 106 (Musca). Java, Pasuruan. LT & ITZA. Muscidae, Musca crassirostris Stein. Lectotype designated by Pont 1970a: 94.

moerens Fabricius, 1794: 349 (Musca). Guinea. T A UZMC F. Platystomatidae, Engistoneura moerens Fabricius.

moesta Gmelin, 1790: 2874 (Musca). N. n. Syrphus lugubris Fabricius. Syrphidae, Pipiza lugubris Fabricius.

moesta Gravenhorst, 1807: 379 (Musca). Unknown, probably Germany. T A UN-KNOWN. Tachinidae. Preocc. Gmelin 1790.

molio Harris, 1780: 111, pl. 33, fig. 54 (*Musca*). England. T A Unknown. Syrphidae, *Neoascia podagrica* Fabricius. Name improperly formed (verb). See Thompson 1981b: 475.

molitus Harris, 1780: 110 (Musca). England. T A Unknown. Syrphidae, Sphaero-phoria scripta Linnaeus.

mollicula Fallén, 1825: 90 (Musca). Sweden, Skåne. LT & NRS. Muscidae, Coenosia mollicula Fallén. Lectotype designated by Pont 1984: 289.

mollis Walker, 1849: 892 (Musca). Ontario, St. Martin's Falls. T & BMNH. Calliphoridae, Phormia regina Meigen.

monachae Ratzeburg, 1844: 173 (Musca). Germany. T A Unknown. Tachinidae, Exorista larvarum Linnaeus.

moneta Walker, 1849: 904 (Musca). France? Lapland? T & BMNH. Sarcophagidae, Ravinia moneta Walker.

monoculus Swederus, 1787: 287 (*Musca*). North America. T A Unknown. Syrphidae. morio Linnaeus, 1758a: 590 (*Musca*). Europe. T A LSL. Bombyliidae, *Hemipenthes morio* Linnaeus. 1 sp. in LSL (Dear MS).

morio Fabricius, 1794: 275 (Rhagio). Germany. T A UZMC F. Sciaridae, Bradysia forcipata Fabricius.

mortisequa Kirby, 1837: 316 (Musca). Alaska ["North America, lat. 65"]. T A Unknown. Calliphoridae, Cynomya cadaverina Robineau-Desvoidy.

mortuorum Linnaeus, 1761: 452 (Musca). Sweden. T A LSL. Calliphoridae, Cynomya mortuorum Linnaeus. 1 sp. in LSL (Dear MS).

muliebris Harris, 1780: 75, pl. 21, fig. 9 (Musca). England. T A Unknown. Pallopteridae, Palloptera muliebris Harris.

mulinus Harris, 1780: index (*Musca*). Incosp. *mellinus* Harris (1780: 74). Dryomyzidae. Name status by present revision.

mulsus Harris, 1780: 116, pl. 34, fig. 20 (Musca). England. TA Unknown. Lauxaniidae.

multispina Awati, 1916b: 138 (Musca). India. ST 9 CRIK. Muscidae, Musca domestica Linnaeus.

munda Wiedemann, 1830: 398 (Musca). Java. T ♀ UZMC. Calliphoridae, Isomyia viredaurea Wiedemann.

munroi Patton, 1936: 487, fig. 11 (Musca). South Africa, Natal, Prospect. ST & UNKNOWN. Muscidae, Musca munroi Patton. See Pont 1990: 167.

muralis Walker, 1849: 888 (Musca). Ontario, St. Martin's Falls. HT & BMNH. Calliphoridae, Lucilia illustris Meigen. [teste Pont].

muraria Scopoli, 1763: 338 (Musca). Carniola. T A DESTROY.

murina Schrank, 1776: 95 (Musca). Austria, Linz. T A Unknown. Syrphidae.

murorum Turton, 1801: 641 (Musca). Subsequent Usage of Syrphus murorum Fabricius. Syrphidae, Eristalis murorum Fabricius.

- muscaria Turton, 1801: 631 (Musca). Subsequent Usage of Stratiomys muscaria Fabricius. Stratiomyidae, Oxycera muscaria Fabricius.
- mussitans Gmelin, 1790: 2867 (Musca). Subsequent Usage of Syrphus mussitans Fabricius. Syrphidae, Arctophila superbiens Müller.
- mutabilis Linnaeus, 1758a: 592 (Musca). Sweden. LT & LSL. Syrphidae, Microdon mutabilis Linnaeus. Lectotype designated by Thompson et al. 1982: 157.
- mutabilis Fabricius, 1787: 331 (Stratiomys). Cayenne. T A UZMC F. Stratiomyidae, Hoplitimyia mutabilis Fabricius.
- mutata Fallén, 1825: 92 (Musca). Sweden. LT & NRS. Muscidae, Lophosceles mutatus Fallén. Lectotype designated by Pont 1984: 290.
- myennis Coquebert, 1798: (Musca). France. T A MNHNP. Otitidae.
- myopina Fallén, 1824: 65 (Musca). Sweden, Skåne, Lund. LT & NRS. Anthomyiidae, Myopina myopina Fallén. Lectotype designated by Michelsen 1983: 114.
- mystacea Linnaeus, 1758a: 591 (Musca). Europe. HT & LSL. Muscidae, Mesembrina mystacea Linnaeus. See Pont 1981: 172.
- naevia Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Milesia semiluctifera de Villers.
- naevosus Harris, 1780: 75, pl. 21, fig. 10 (Musca). England. T A Unknown. Platystomatidae.
- nana Stephens, 1829a: 60 (Musca). Nomen nudum. England. T A BMNH. Calliphoridae.
- nana Meigen, 1830: 375 (Musca). Germany, Berlin District. HT & Lost. Muscidae, Musca tempestiva Fallén. See Pont 1986b: 232.
- nana Meigen, 1838: 306 (Musca). Subsequent Usage of Nitellia nana Robineau-Desvoidy. Calliphoridae, Pollenia rudis Fabricius.
- nancauriensis Schiner, 1868: 306 (Musca). Nomen nudum. Nicobar Is. T & NMW. Muscidae, Musca domestica Linnaeus. Published in synonymy, not subsequently validated by usage. Proposed in synonymy with domestica Linnaeus.
- napobrassicae Bjerkander, 1780: 196 (Musca). Sweden. T A UNKNOWN. Anthomyiidae, Delia radicum Linnaeus.
- nasatus Harris, 1780: 105, pl. 32, fig. 35 (*Musca*). England. T A Unknown. Syrphidae, *Rhingia* sp.
- nasuta Schrank, 1781: 475 (Musca). Austria, Vienna, Brigittenau. T A Unknown. Chloropidae, Chlorops pumilionis Bjerkander.
- natalensis Villeneuve, 1916: 512 (Musca). South Africa, Natal, Durban. ST ♂ SAMCT. Muscidae, Musca gabonensis Macquart.
- natans Turton, 1801: 639 (Musca). Subsequent Usage of Syrphus natans Fabricius. Syrphidae, Merodon natans Fabricius.
- navus Harris, 1780: 109, pl. 33, fig. 50 (Musca). England. T A Unknown. Syrphidae, Platycheirus sp.
- nebulo Fabricius, 1794: 321 (Musca). India Orientali. T A DESTROY. Muscidae, Musca domestica Linnaeus. See Michelsen 1979a: 187.
- nebulosa Panzer, 1798b: 20 (Musca). Germany, Nuremberg. T & ZMHU. Tachinidae, Allophora obesa Fabricius.
- nebulosa Lamarck, 1816: 363 (*Musca*). Subsequent Usage of *Musca nebulosa* Panzer. Tachinidae, *Allophora obesa* Fabricius.
- nectarea Linnaeus, 1767: 983 (Musca). Europe. T A LSL. Scatopsidae, Scatopse notata Linnaeus. 1 sp. in LSL (Dear MS).

nectareus Fabricius, 1787: 341 (Syrphus). Denmark. T A UZMC. Syrphidae, Episyrphus cannabina Scopoli.

nectarina Gmelin, 1790: 2876 (Musca). N. n. Musca nectareus Fabricius. Syrphidae, Episyrphus cannabina Scopoli.

nectarivora Turton, 1801: 656 (Musca). N. n. Musca nectarea Linnaeus. Scatopsidae, Scatopse notata Linnaeus.

negriabdomina Awati, 1916b: 138 (Musca). India. HT A CRIK. Muscidae, Musca negriabdomina Awati.

nemorum Linnaeus, 1758a: 591 (Musca). Sweden. LT & LSL. Syrphidae, Eristalis arbustorum Linnaeus. Lectotype designated by Thompson et al. 1982: 158.

nemorum Fallén, 1823: 55 (Musca). Sweden, Skåne. LT ♂ NRS. Muscidae, Phaonia incana Wiedemann. Preocc. Linnaeus 1758. Lectotype designated by Pont 1984: 290.

neustriae Ratzeburg, 1844: 173 (Musca). Germany. T A Unknown. Tachinidae, Tachina neustriae Ratzeburg.

nevilli Kleynhans, 1987: 115, fig. 1 (Musca). South Africa, N Transvaal, 15 km N of Pretoria, Farm "Kaalplaas". HT & NCIP. Muscidae, Musca nevilli Kleynhans.

nigra Linnaeus, 1764a: 285 (Musca). Nomen nudum. [Sweden]. Chloropidae, Oscinella frit Linnaeus. Published in non-binominal work. N. Syn.

nigra Forskål, 1775: 24 (*Musca*). Arabia. T A Unknown. Syrphidae, *Ischiodon* sp. nigra de Villers, 1789a: 432 (*Musca*). Subsequent Usage of *Volucella nigra* Geoffroy. nigra de Villers, 1789a: 420 (*Musca*). Subsequent Usage of *Nemotelus niger* De Geer. Scenopinidae, *Scenopinus niger* De Geer.

nigrana Turton, 1801: 643 (Musca). N. n. Syrphus nigrita Fabricius. Syrphidae, Sterphus jamaicensis Gmelin.

nigricans de Villers, 1789a: 509 (Musca). Sweden? T A Unknown. Anisopodidae, Sylvicola fuscatus Fabricius. N. Syn.

nigricans Gmelin, 1790: 2836 (Musca). Europe. T A NMI. Stratiomyidae, Odontomyia microleon Linnaeus. Preocc. de Villers 1789.

nigricans Robineau-Desvoidy, 1830: 394 (Sphora). Australia. T A DESTROY. Muscidae, Musca domestica Linnaeus.

nigricans Macquart, 1835: 268 (Musca). Subsequent Usage of Sphora nigricans Robineau-Desvoidy. Muscidae, Musca domestica Linnaeus.

nigriceps Walker, 1849: 881 (Musca). Subsequent Usage of Lucilia nigriceps Macquart. Calliphoridae, Lucilia nigriceps Macquart.

nigricolor Fallén, 1825: 81 (Musca). Sweden, Skåne. HT & ZIL. Muscidae, Hebecnema nigricolor Fallén. See Pont 1984: 290.

nigricornis Fabricius, 1794: 331 (Musca). India Orientali. T A UNKNOWN. Tachinidae.

nigricruris Rainbow, 1897: 98 (Ebenia). Ellice Is, Funafuti Atoll, Tuvalu. HT & AMS. Muscidae, Musca vetustissima Walker. See Pont 1968: 90.

nigrina Fallén, 1817: 241 (Musca). Sweden. T A NRS. Tachinidae, Thelaira nigrina Fallén. N. Status

nigrina Meigen, 1838: 305 (Musca). Germany, Stolberg. HT & MNHNP. Calliphoridae, Pollenia amentaria Scopoli. Preocc. Fallén 1817. See Rognes 1991a: 221.

nigripennis Fabricius, 1794: 346 (Musca). France. T A UNKNOWN. Phaeomyiidae, Pelidnoptera nigripennis Fabricius.

nigripes Gmelin, 1790: 2859 (Musca). Europe. T A NMI. Tachinidae?

nigripes Fabricius, 1794: 341 (Musca). France. T A MNHNP. Dolichopodidae, Chrysotus laesus Wiedemann. Preocc. Gmelin 1790. N. Syn.

nigripes Fabricius, 1794: 319 (Musca). Germany. T A UZMC F. Tachinidae, Thelaira nigrina Fallén. Preocc. Gmelin 1790. N. Comb.

nigripilis Gmelin, 1790: 2859 (Musca). Europe. T A NMI.

nigrita Scopoli, 1763: 328 (Musca). Idrija. T A DESTROY. Sarcophagidae, Nyctia halterata? Panzer.

nigrita Fabricius, 1781: 427 (Syrphus). Jamaica. T A Unknown. Syrphidae, Sterphus jamaicensis Gmelin. Preocc. Scopoli 1763.

nigrita Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio nigritus Fabricius. Bombyliidae, Thyridanthrax fenestratus Fallén.

nigrita Fallén, 1823: 60 (Musca). Sweden, Gotland, Kjellunge. HT & Lost. Muscidae, Hebecnema vespertina Fallén. Preocc. Scopoli 1763. See Pont 1984: 290.

nigrithorax Stein, 1909: 212 (Musca). Java, Semarang. LT & ITZA. Muscidae, Musca ventrosa Wiedemann. Lectotype designated by Pont 1970a: 96.

nigromarginata Stephens, 1829a: 60 (Musca). Nomen nudum. England. T A BMNH. Calliphoridae.

nitens de Villers, 1789a: 549 (Musca). Southern France. T A Author. Syrphidae, Ferdinandea cuprea Scopoli.

nitens Zetterstedt, 1845: 1340 (Musca). N. n. Musca vespillo sensu Meigen. Sweden. LT & ZIL. Calliphoridae, Pollenia amentaria Scopoli. Preocc. de Villers 1789. Lectotype designated by Rognes 1991a: 221.

nitescens Walker, 1861d: 302 (Musca). Aru Islands, Makian. T & BMNH. Calliphoridae, Lucilia papuensis Macquart.

nitida Wiedemann, 1830: 410 (*Musca*). Nomen nudum. T A NMW. Muscidae, Morellia nigricosta Hough. Published in synonymy, not subsequently validated by usage. Proposed in synonymy with violacea Fabricius.

nivalis Bjerkander, 1777: 34 (Musca). Sweden. T A UNKNOWN.

niveisquama Thomson, 1868: 547 (Musca). China, Philippines, Singapore. TANRS. Muscidae, Musca sorbens Wiedemann.

nobilis Gmelin, 1790: 2829 (Musca). N. n. Bibio nobilitata Fabricius. Therevidae, Thereva nobilitata Fabricius.

nobilis Meigen, 1826: 56 (Musca). Germany. ST ♂♀ NMW. Calliphoridae, Lucilia sericata Meigen. Preocc. Gmelin 1790. See Collin 1926: 259.

nobilis Gistel, 1856: 430 (Musca). Nomen nudum. Egypt. T A UNKNOWN. Published without diagnosis or indication.

nobilitata Linnaeus, 1767: 995 (Musca). Europe. T A LSL. Dolichopodidae, Poecilobothrus nobilitatus Linnaeus. 3 sp. in LSL (Dear MS).

nobilitata Fabricius, 1775: 757 (Bibio). Denmark. T A UZMC F. Therevidae, Thereva nobilitata Fabricius.

noctiluca Linnaeus, 1758a: 593 (Musca). Sweden. LT Q LSL. Syrphidae, Pipiza noctiluca Linnaeus, Lectotype designated by Thompson et al. 1982: 158.

nora Walker, 1849: 910 (Musca). France & Lapland. LT & BMNH. Muscidae, Myospila meditabunda Fabricius. Lectotype designated by Pont 1970b: 111.

norwegica Gmelin, 1790: 2865 (Musca). N. n. Rhagio fasciatus Fabricius. Rhagionidae.

nosatus Harris, 1780: 105 (Musca). Incosp. nasatus Harris. Syrphidae, Rhingia sp.

- notata Fabricius, 1781: 448 (Musca). England. T A Yeats. Dolichopodidae, Scellus notatus Fabricius.
- notata Estlund, 1796: 130 (Musca). Sweden, Elfkarlby. T A UNKNOWN. Preocc. Fabricius 1781.
- notata Fallén, 1823: 62 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Limnophora tigrina Am Stein. Preoce. Fabricius 1781. Lectotype designated by Pont 1984:291.
- nova Schrank, 1776: 93 (Musca). Austria. T A Unknown. Syrphidae, Microdon sp. novemmaculata de Villers, 1789b: exxxvii (Musca). N. n. Musca tuberculata de Villers [1789a: 428]. Bibionidae, Dilophus novemmaculatus de Villers. Published as 9-maculata.
- novemmaculata Gmelin, 1790: 2862 (Musca). Europe. T A NMI. Preocc. de Villers 1789.
- novempunctata Gmelin, 1790: 2862 (Musca). Europe. T A NMI.
- nugater Harris, 1780: 120, pl. 35, fig. 36 (Musca). Incosp. nugator Harris. Muscidae, Phaonia rufiventris Scopoli.
- nugator Harris, 1780: index (Musca). England. T & Unknown. Muscidae, Phaonia rufiventris Scopoli.
- obesa Gmelin, 1790: 2868 (*Musca*). Subsequent Usage of *Syrphus obesus* Fabricius. Syrphidae, *Ornidia obesa* Fabricius.
- obfuscata Gmelin, 1790: 2880 (Musca). N. n. Conops fuscus Scopoli. Syrphidae, Eristalis interrupta Poda.
- obscoena Eschscholtz, 1822: 113 (Musca). Alaska, "Insel Unalaschka, an der Meeresküste". T A Unknown. Calliphoridae, Calliphora vomitoria Linnaeus.
- obscura Fabricius, 1794: 315 (Musca). Germany. HT & UZMC F. Calliphoridae, Pollenia rudis Fabricius. See Rognes 1987: 496.
- obscura Meigen, 1830: 374 (Musca). Germany, Berlin. T A MNHNP. Calliphoridae. Preocc. Fabricius 1794.
- obscura Walker, 1853b: 346 (Musca). Senegal. T & BMNH. Muscidae, Pyrellina distincta Walker. Preocc. Fabricius 1794.
- obscura Pont, 1968: 89 (Degeeria). Ellice Island, Funafuti Atoll, Tuvalu. ST ? AMS. Muscidae, Musca domestica Linnaeus. Published in synonymy, not subsequently validated by usage. Rainbow MS name cited in synonymy with domestica Linnaeus.
- obscurata Walker, 1858b: 105 (Musca). Moluccas, Aru Islands. T 2 Lost. Calliphoridae, Onesia obscurata Walker. Types not in BMNH (Pont).
- obsidianus Harris, 1776: 37, pl. 9, fig. 8 (Musca). England. T & Unknown. Tachinidae, Zophomyia temula Scopoli.
- obsoleta Fallén, 1817: 238 (Musca). Sweden. LT & NRS. Sarcophagidae, Sarcophila latifrons Fallén. Lectotype designated by Pape 1986: 305.
- obtrusa Walker, 1858b: 105 (Musca). Aru Islands. LT & BMNH. Muscidae, Neomyia timorensis Robineau-Desvoidy. Lectotype designated by Pont 1966: 94.
- obtusipennis Fallén, 1823: 57 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Helina obtusipennis Fallén. Lectotype designated by Pont 1984: 291.
- occidentis Walker, 1853b: 347 (Musca). United States. T & BMNH. Muscidae, Eudasyphora cyanicolor Zetterstedt. Preocc. Walker 1853: 332.
- occidentis Walker, 1853b: 332 (Musca). United States. HT & BMNH. Muscidae, Stomoxys calcitrans Linnaeus. See Pont 1990: 167.

occidua Fabricius, 1794: 315 (Musca). West Indies. T A UZMC F. Sarcophagidae, Tricharaea occidua Fabricius. See Pape 1986: 302.

oceanica Le Guillou, 1842: 316 (Musca). Tasmania, Hobart. LT & MNHNP. Muscidae, Musca domestica Linnaeus. Lectotype designated by Pont 1973: 170.

ochracea Ratzeburg, 1840: 125 (Musca). Germany. Tachinidae, Zenillia fulva Fallén. ochrapesus Rathvon, 1855: 10 (Musca). Pennsylvania, Lancaster. T A Unknown. Chyromyidae, Chyromya flava Linnaeus.

ochricornis Wiedemann, 1830: 408 (*Musca*). Brazil. T A ZMHU NMW. Muscidae, *Morellia ochricornis* Wiedemann.

ochroleuca Gmelin, 1790: 2878 (Musca). Europe. T A NMI. Syrphidae.

ochroptera Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

ochropus Turton, 1801: 635 (Musca). N. n. Musca flavipes Fabricius. Therevidae, Dialineura anilis Linnaeus.

octopunctata Coquebert, 1798: 145 (Musca). France, Reims. TAMNHNP. Otitidae, Myennis octopunctata Coquebert.

ocymi Turton, 1801: 651 (Musca). Subsequent Usage of Syrphus ocymi Fabricius. Syrphidae, Platycheirus granditarsus Forster.

oenopota Scopoli, 1763: 337 (Musca). Carniola. T A DESTROY. Drosophilidae, Drosophila funebris? Fabricius.

oestracea Linnaeus, 1758a: 592 (Musca). Sweden. LT & LSL. Syrphidae, Eristalis oestracea Linnaeus. Lectotype designated by Thompson et al. 1982: 158.

oleae Gmelin, 1790: 2844 (Musca). France & Italy. T A Unknown. Tephritidae, Dacus oleae Rossi. Preocc. Rossi 1790.

oleae Rossi, 1790: 317 (*Musca*). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Tephritidae, *Dacus oleae* Rossi.

oleae Petagna, 1792: 685 (Musca). Italy, Calabria. T A UNKNOWN. Tephritidae, Dacus oleae Rossi. Preocc. Rossi 1790.

oleae Fabricius, 1794: 349 (Musca). Subsequent Usage of Musca oleae Rossi. Tephritidae, Dacus oleae Rossi.

olens Fuesslin, 1775: 54 (Musca). Switzerland, Utliberg. T A Unknown. Xylophagidae, Coenomyia ferruginea Scopoli. N. Syn.

olivacea Meigen, 1838: 308 (Musca). Subsequent Usage of Pollenia olivacea Macquart. Calliphoridae, Pollenia rudis Fabricius.

onopordinis Fabricius, 1775: 787 (Musca). Denmark. T A UZMC F. Tephritidae, Euleia heraclii Linnaeus.

oppidana Scopoli, 1763: 349 (*Musca*). Carniola. T A DESTROY. Chyromyidae, *Chyromya oppidana* Scopoli.

optata Walker, 1859: 137 (Musca). Sulawesi, Makassar. T & BMNH. Muscidae, Neomyia diffidens Walker.

opulenta Walker, 1858b: 104 (Musca). Moluccas, Aru Islands. HT 9 BMNH. Calliphoridae, Platytropesa auriceps Macquart. See Crosskey 1965: 85.

oratoria Turton, 1801: 614 (Musca). Emend. aratoria Fabricius. Sciomyzidae, Ilione albiseta Scopoli.

orbiculata Geoffroy, 1785: 484 (Musca). France, Paris. T A Author.

orbiculus Gmelin, 1790: 2875 (Musca). Subsequent Usage of Syrphus orbiculus Fabricius. Acroceridae, Acrocera orbiculus Fabricius.

orientalis Walker, 1849: 870 (Musca). Subsequent Usage of Lucilia orientalis Macquart. Calliphoridae, Chrysomya rufifacies Macquart.

orior Harris, 1780: 143, pl. 42, fig. 48 (*Musca*). England. Calliphoridae, *Protophormia terraenovae* Robineau-Desvoidy. Name improperly formed (verb).

ornate Harris, 1780: 146, pl. 43, fig. 84 (Musca). England. T A Unknown. Muscidae, Azelia nebulosa Robineau-Desvoidy. Name improperly formed (adverb).

ornithovora Scopoli, 1763: 342 (*Musca*). Carniola. T A DESTROY. Piophilidae? osiris Wiedemann, 1830: 420 (*Musca*). Egypt. HT & NMW. Muscidae, *Musca osiris* Wiedemann. See Pont 1986b: 251.

ovipara Portschinsky, 1910: 25, fig. 21 (Musca). European Russia. ST ♂♀ ASL. Muscidae, Musca autumnalis De Geer.

pabulorum Fallén, 1817: 252 (Musca). Sweden. LT ? ZIL. Muscidae, Muscina prolapsa Harris. Lectotype designated by Pont 1984: 291.

pacifica Gmelin, 1790: 2872 (Musca). N. n. Syrphus cingulatus Fabricius. Syrphidae, Helophilus cingulatus Fabricius.

pagana Fabricius, 1794: 326 (Musca). Denmark. LT & UZMC. Muscidae, Mydaea corni Scopoli. Preocc. Harris 1780. Lectotype designated by Michelsen 1979a: 187.

paganus Harris, 1780: 153, pl. 45, fig. 84 (Musca). England. T A Unknown. Scathophagidae.

pallens Walker, 1849: 868 (Musca). Subsequent Usage of Bengalia pallens Robineau-Desvoidy. Calliphoridae, Bengalia labiata Robineau-Desvoidy.

pallida Fabricius, 1787: 344 (Musca). Denmark, Copenhagen. LT & UZMC F. Muscidae, Phaonia pallida Fabricius. Lectotype designated by Michelsen 1979a: 187.

pallida de Villers, 1789a: 509 (Musca). Sweden, "Oelandica". T A Unknown. Preocc. Fabricius 1787.

pallipes Gmelin, 1790: 2834 (Musca). Subsequent Usage of Stratiomys pallipes Fabricius. Stratiomyidae, Stratiomys pallipes Fabricius.

pallipes Fabricius, 1794: 340 (Musca). Germany. T A UZMC F. Dolichopodidae, Syntormon pallipes Fabricius.

palmipes Rossi, 1794: 74 (Musca). Italy. T A ZMHU. Platypezidae, Platypeza fasciata? Meigen.

palpator Harris, 1780: 119, pl. 35, fig. 37 (Musca). England. T A Unknown. Sepsidae, Orygma sp.

palustris Scopoli, 1763: 345 (Musca). Carniola. T A DESTROY. Syrphidae.

pampasiana Bigot, 1888: 607 (Musca). Argentina, Buenos Aires. HT & BMNH. Muscidae, Musca domestica Linnaeus. See Pont 1990: 167.

pandia Walker, 1849: 898 (*Musca*). France? HT & BMNH. Calliphoridae, *Bellardia pandia* Walker. See Schumann 1974: 253.

pantherina Linnaeus, 1758a: 590 (Musca). Sweden. T A LSL. Stratiomyidae, Nemotelus pantherinus Linnaeus. 1 sp. in LSL (Dear MS).

papatasi Gmelin, 1790: 2866 (*Musca*). Subsequent Usage of *Bibio papatasi* Scopoli. Psychodidae, *Phlebotomus papatasi* Scopoli.

paralleli Harris, 1782: 42 (Musca). Missp. parralleli Harris. Syrphidae, Eristalis arbustorum Linnaeus.

parallelus Harris, 1776: 57, pl. 1, fig. 8 (Musca). England. T A Unknown. Syrphidae, Helophilus parallelus Harris.

parasitica Hartig, 1838: 301 (Musca). Germany, Brunswick. T A UNKNOWN. Tachinidae.

- parcus Harris, 1780: 144, pl. 42, fig. 56 (Musca). England. T A Unknown. Rhinophoridae, Rhinophora lepida Meigen.
- parietina Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Tephritidae, Oxyna parietina Linnaeus. See White 1987: 104.
- parralleli Harris, 1776: 43, pl. 10, fig. 7 (Musca). England. T A Unknown. Syrphidae, Eristalis arbustorum Linnaeus.
- parrallelus Harris, 1780: index (Musca). Missp. parallelus Harris. Syrphidae, Helophilus parallelus Harris.
- parrelleli Harris, 1776: 43 (Musca). Incosp. parralleli Harris. Syrphidae, Eristalis arbustorum Linnaeus. Name revised by Goffe 1946: 74.
- parviceps Zetterstedt, 1845: 1325 (Musca). Nomen nudum. Muscidae, Pyrellia rapax Harris. Published in synonymy, not subsequently validated by usage. Proposed in synonymy with aenea Zetterstedt.
- parvula Fallén, 1825: 75 (Musca). Sweden, Skåne, Äsperöd. LT ♀ ZIL. Anthomyidae, Subhylemyia longula Fallén. Preocc. Harris 1776. Lectotype designated by Michelsen 1983: 114.
- parvula Meigen, 1826: 55 (Musca). Germany. ST ♂ NMW. Calliphoridae, Lucilia illustris Meigen. Preocc. Harris 1776. See Collin 1926: 259.
- parvulus Harris, 1776: 48, pl. 11, fig. 11 (Musca). England. T \( \Sigma\) Unknown. Stratiomyidae, Microchrysa polita Linnaeus.
- pascuorum Meigen, 1826: 74 (*Musca*). Germany, probably Stolberg. LT ♀ MNHNP. Muscidae, *Muscina pascuorum* Meigen. Lectotype designated by Pont 1986b: 236.
- patersoni Zielke, 1971c: 133 (Musca). Zaire, P. N. A. Mubiliba. HT & SAIMR. Muscidae, Musca patersoni Zielke.
- patiens Walker, 1858: 106 (Musca). Moluccas, Aru Islands. T 

  BMNH. Calliphoridae, Polleniopsis patiens Walker.
- pattoni Austen, 1910: 115 (Musca). India, Madras, Saidapet, Guindy. LT & BMNH. Muscidae, Musca pattoni Austen. Lectotype designated by Pont 1990: 168.
- pavida Illiger, 1807: 465 (Musca). Germany. T A ZMHU. Tachinidae.
- pedella Fallén, 1825: 88 (*Musca*). Sweden, Skåne, Äsperöd. LT PNRS. Muscidae, Coenosia pedella Fallén. Lectotype designated by Pont 1984: 291.
- pedissequus Harris, 1776: 61, pl. 15, fig. 19 (Musca). England. T A Unknown. Syrphidae, Xanthogramma pedissequum Harris.
- pedo Harris, 1780: 115, pl. 34, fig. 15 (Musca). England. T A Unknown. Micropezidae.
- pellita Forster, 1770: 15 (Musca). Subsequent Usage of Tabanus pellitus Sulzer. Tabanidae, Heptatoma pellucens Fabricius.
- pellucens Linnaeus, 1758a: 595 (Musca). Sweden. LT & LSL. Syrphidae, Volucella pellucens Linnaeus. Lectotype designated by Thompson et al. 1982: 159.
- pellucens Meigen, 1835: 71 (Musca). Germany, Bavaria, Munich. HT & DESTROY. Muscidae, Musca domestica Linnaeus. Preocc. Linnaeus 1758. See Pont 1986b: 237.
- pellucens Meigen, 1838: 303 (Musca). Germany, Bavaria. T Q DESTROY. Muscidae, Musca domestica Linnaeus. Preocc. Linnaeus 1758.
- pendula Linnaeus, 1758a: 591 (Musca). Sweden. LT Q LSL. Syrphidae, Helophilus pendulus Linnaeus. Lectotype designated by Thompson et al. 1982: 159.
- pennipes Forster, 1770: 15 (Musca). Nomen nudum. England. T A UNKNOWN.

pennipes Fabricius, 1781: 450 (Musca). North America. HT & UZMC F. Tachinidae, Trichopoda pennipes Fabricius. See Townsend 1931a: 83.

peragro Harris, 1780: 119, pl. 35, fig. 29 (Musca). England. T A Unknown. Micropezidae. Name improperly formed (verb).

percussus Harris, 1780: 120, pl. 35, fig. 37 (Musca). England. T A Unknown. Psilidae.

perelegand Harris, 1780: 74, pl. 21, fig. 5 (Musca). England. T A Unknown. Tephritidae, Trypeta zoe Meigen.

perelegans Harris, 1782: index (Musca). Missp. perelegand Harris. Tephritidae, Trypeta zoe Meigen.

perexilis Harris, 1780: 81, pl. 24, fig. 24 (Musca). England. T A Unknown. Syrphidae, Baccha perexilis Harris.

perexillis Harris, 1780: index (*Musca*). Incosp. *perexilis* Harris. Syrphidae, *Baccha perexilis* Harris. Name status by present revision.

perfixa Walker, 1856a: 26 (Musca). Malaysia, Mt. Ophir. T & BMNH. Muscidae, Neomyia diffidens Walker.

perlata Walker, 1861a: 314 (Musca). South Africa, Natal. T & BMNH. Calliphoridae, Pericallimyia perlata Walker.

permundus Harris, 1782: index (Musca). Missp. purmundus Harris. Tephritidae, Anomoia purmundus Harris.

pernix Harris, 1780: 84, pl. 25, fig. 13 (Musca). England. T A Unknown. Sarcophagidae, Ravinia pernix Harris.

personata Geoffroy, 1785: 476 (Musca). France, Paris. T A Author. Preocc. Harris 1780.

personatus Harris, 1780: 79, pl. 24, fig. 20 (*Musca*). England, London, Stepney. T A Unknown. Syrphidae, *Pocota personata* Harris.

pertinax Linnaeus, 1764b: 331 (Musca). Sweden. T A LSL.

pervenio Harris, 1780: 139, pl. 41, fig. 23 (*Musca*). England. Calliphoridae, *Proto-* calliphora azurea Fallén. Name improperly formed (verb).

petiolata Turton, 1801: 612 (Musca). N. n. Musca compressa Fabricius. Tachinidae, Cordyligaster petiolata Fabricius.

petronella Linnaeus, 1758a: 598 (Musca). Europe. T A LSL. Micropezidae, Calobata petronella Linnaeus. 3 sp. in LSL (Dear MS).

phalaenarum Scharfenberg, 1805: 1003 (Musca). Germany. TA Unknown. Tachinidae.

phara Walker, 1849: 889 (Musca). Unknown. T Q BMNH. Muscidae, Neomyia peronii Robineau-Desvoidy.

phasiaeformis Meigen, 1826: 72 (Musca). Austria or Southern France. LT & MNHNP. Muscidae, Musca tempestiva Fallén. Lectotype designated by Pont 1986b: 238.

phauda Walker, 1849: 896 (Musca). Galapagos. T & BMNH. Calliphoridae, Cochliomyia macellaria Fabricius.

phellia Walker, 1849: 884 (Musca). North Bengal. T 

BMNH. Calliphoridae, Hemipyrellia pulchra Wiedemann.

pica Fabricius, 1805: 293 (Musca). South America. HT & UZMC. Tachinidae, Rhamphinina pica Fabricius. See Townsend 1931a: 100.

picata Gmelin, 1790: 2862 (Musca). Europe. T A NMI. picea Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

piceae Manuel, 1811: 39 (Musca). Emend. picea Gmelin.

picta Fabricius, 1781: 452 (*Musca*). North America. T A UNKNOWN. Otitidae, *Delphinia picta* Fabricius.

pigra Geoffroy, 1785: 499 (Musca). France, Paris. T A Author. Chloropidae, Meromyza saltatrix Linnaeus. N. Syn.

pigra Schrank, 1803: 114 (Musca). Germany, Bavaria, Gern & Ingolstadt. T A Unknown. Syrphidae, Xylota ignava Panzer. Preocc. Geoffroy 1785.

pilifacies Emden, 1965: 58 (Musca, as interrupta ssp.). Taiwan, Chia-i, U-fen, Mt. Lu-lin. HT & BMNH. Muscidae, Musca pilifacies Emden. See Pont 1990: 168.

pilosa Drury, 1773: 109 (Musca). Jamaica. T A Author. Tachinidae, Archytas pilosus Drury.

pilosa Bloch, 1776: 176, pl. 4, fig. 16 & 184, pl. 5, fig. 16 (*Musca*). Nomina nuda. While the word pilosa is italicized so that *Musca pilosa* appears to be a binomen, Bloch was not describing new species. The word pilosa is only the second word of a diagnosis which was set in italics by mistake.

pilosa Awati, 1916b: 138 (Musca). India. ST \( \text{CRIK. Muscidae}, Musca bezzii \) Patton & Cragg. Preocc. Drury 1773.

pinastri De Geer, 1776: 113, pl. 7, fig. 7 (Musca). Sweden. T A NRS. Syrphidae, Dasysyrphus pinastri De Geer.

The syntypes of *Musca pinastri* are lost. They were not present when the De Geer Collection was accessioned in 1834 (Persson, *in litt.*). However, the species is easily recognized from the figures provided by De Geer. We select as lectotype of *pinastri* the specimen which was figured (De Geer 1776: pl. 7, fig. 1). The lectotype of *lunulatus* Meigen is a dark specimen of *Dasysyrphus venustus* Meigen as was pointed out by Verrall (1901a: 353). *Musca pinastri* De Geer, however, is an available name for *lunulatus* of authors, as pointed out by Lundbeck (1917: 284).

pinguis Gmelin, 1790: 2868 (Musca). Subsequent Usage of Syrphus pinguis Fabricius. Syrphidae, Meromacrus pinguis Fabricius.

pinguis Fabricius, 1805: 302 (Musca). South America. HT & UZMC. Tachinidae, Winthemia pinguis Fabricius. See Townsend 1931b: 174.

piniperdae Ratzeburg, 1844: 174 (Musca). Germany. T A Unknown. Tachinidae, Gonia picea Robineau-Desvoidy.

pinivorae Ratzeburg, 1844: 173 (Musca). Germany. T A Unknown. Tachinidae, Blondelia nigripes Fallén.

pionia Walker, 1849: 880 (Musca). Galapagos. T & BMNH. Calliphoridae, Lucilia pionia Walker.

pipiens Linnaeus, 1758a: 594 (Musca). Sweden. LT & LSL. Syrphidae, Syritta pipiens Linnaeus. Lectotype designated by Thompson et al. 1982: 159.

pipines Geoffroy, 1785: 486 (Musca). Missp. pipiens Linnaeus. Syrphidae, Syritta pipiens Linnaeus.

placida Müller, 1764: 85 (Musca). Denmark, Sjaelland, Frederiksdal. T A UN-KNOWN. Tephritidae, Urophora stigma? Loew.

placida Walker, 1853b: 343 (Musca). South Australia. T ♂ BMNH. Calliphoridae, Calliphora dubia Macquart. Preocc. Müller 1764.

planiceps Wiedemann, 1824: 48 (Musca). Java. HT & UZMC. Muscidae, Musca planiceps Wiedemann. See Townsend 1931c: 369.

planifrons Fabricius, 1798: 565 (Musca). France, Paris. T A MNHNP. Chloropidae, Platycephala planifrons Fabricius.

plebeja Linnaeus, 1758a: 589 (Musca). Europe. T A LSL. Therevidae, Thereva plebeja Linnaeus.

plebeja Fabricius, 1781: 440 (Musca). Germany, Kiel. T A UZMC F. Tachinidae, Dexia rustica Fabricius. Preocc. Linnaeus 1758.

plombea de Villers, 1789a: 463 (Musca). Missp. plumbea Geoffroy.

plumata De Geer, 1776: 134, pl. 8, fig. 9 (Musca). Sweden. T A NRS. Syrphidae, Volucella bombylans Linnaeus.

plumbea Geoffroy, 1785: 492 (Musca). France, Paris. T A Author.

plumipes Scopoli, 1763: 334 (Musca). Carniola. T A DESTROY. Dolichopodidae, Dolichopus plumipes Scopoli.

plumosa Gmelin, 1790: 2868 (Musca). Europe. T A NMI. Syrphidae, Volucella bombylans Linnaeus.

pluvialis Linnaeus, 1758a: 597 (Musca). Europe. HT & LSL. Anthomyiidae, Anthomyia pluvialis Linnaeus. See Pont 1981: 172.

podagrica Gmelin, 1790: 2873 (Musca). Subsequent Usage of Syrphus podagrica Fabricius. Syrphidae, Neoascia podagrica Fabricius.

poeciloptera Schrank, 1776: 96, pl. 3, fig. 22 (*Musca*). Austria, Linz. T A Unknown. Tephritidae, *Platyparea poeciloptera* Schrank.

polisma Walker, 1849: 878 (Musca). Unknown. T & DESTROY. Calliphoridae.

polita Linnaeus, 1758a: 598 (*Musca*). Europe. T A LSL. Stratiomyidae, *Microchrysa polita* Linnaeus. 1 sp. in LSL (Dear MS).

polita Walker, 1853b: 338 (Musca). East Indies. T & BMNH. Muscidae, Neomyia lauta Wiedemann. Preocc. Linnaeus 1758.

polita Malloch, 1929b: 112 (Lissasterna). Namibia, Farm Otjitueza, 66km NE Windhoek. HT ♂ ZSZMH. Muscidae, Musca lasiophthalma Thomson. Preocc. Walker 1853. See Zielke 1971c: 109 & 1971d: 174.

politus Harris, 1780: 81, pl. 24, fig. 26 (Musca). England. T A Unknown. Syrphidae, Lejogaster metallina Fabricius. Preocc. Linnaeus 1758.

pollinosa Stein, 1909: 211 (Musca). Java, Batavia. LT & ITZA. Muscidae, Musca planiceps Wiedemann. Lectotype designated by Pont 1970a: 99.

polyzonias Lepechin, 1775: 211, pl. 11, fig. 29 (Musca). Nomen nudum. [Russia]. Bombyliidae. Published in non-binominal work.

polyzonias Gmelin, 1790: 2833 (Musca). Siberia. T A Unknown. Bombyliidae.

porca Latreille, 1804: 196 (Musca). France. T A MNHNP. Otitidae, Otites porca Latreille. N. Status

porcina De Geer, 1776: 98 (Musca). N. n. Musca tenax Linnaeus. Syrphidae, Eristalis tenax Linnaeus.

porphyrina Walker, 1856a: 24 (*Musca*). Malaysia, Mt. Ophir. T & BMNH. Calliphoridae, *Lucilia porphyrina* Walker.

potens Harris, 1780: 110, pl. 33, fig. 53 (Musca). England. T A Unknown. Syrphidae, Myolepta potens Harris.

potentillae de Villers, 1789a: 510 (Musca). Sweden? T A Unknown.

praeceps Scopoli, 1763: 333 (Musca). Carniola. TA DESTROY. Tachinidae, Mintho praeceps Scopoli.

praecox Walker, 1864: 236 (Musca). North Ceram. HT & BMNH. Muscidae, Musca conducens Walker. See Pont 1990: 168.

praedicens Walker, 1859b: 139 (Musca). Sulawesi, Makasar. T 

BMNH. Muscidae, Graphomya praedicens Walker.

praedo Rossi, 1794: 75 (Musca). Italy. T A ZMHU.

praepotens Fallén, 1825: 83 (Musca). Subsequent Usage of Anthomyia praepotens Wiedemann. Anthomyiidae, Eutrichota praepotens Wiedemann.

praeusta Panzer, 1804: 209 (Musca). Germany, Regensburg. T A Unknown.

prashadii Patton, 1922b: 69 (Musca). India, Koharnag. LT & BMNH. Muscidae, Musca autumnalis De Geer. Lectotype designated by Pont 1990: 168.

prasina Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Cheilosia sp. pratorum Gmelin, 1790: 2870 (Musca). Subsequent Usage of Syrphus pratorum Fabricius. Syrphidae, Meromacrus pratorum Fabricius.

pratorum Meigen, 1826: 78 (Musca). Germany, probably Stolberg. LT ♂ MNHNP. Muscidae, Dasyphora pratorum Meigen. Lectotype designated by Pont 1986b: 240.

primitiva Walker, 1849: 903 (Musca). China. HT & BMNH. Muscidae, Musca sorbens Wiedemann. See Pont 1990: 168.

princeps Harris, 1780: 151, pl. 45, fig. 76 (Musca). England. T Q Unknown. Muscidae, Mydaea corni Scopoli.

prisca Walker, 1849: 903 (Musca). Australia. HT & BMNH. Muscidae, Musca vetustissima Walker. See Pont 1973: 148 & 1990: 168.

procedo Harris, 1780: 141, pl. 41, fig. 42 (*Musca*). England. Tachinidae. Name improperly formed (verb).

processioneae Ratzeburg, 1840: 125 (Musca (Tachina)). Germany. T A UN-KNOWN. Tachinidae, Carcelia processioneae Ratzeburg.

processioneae Ratzeburg, 1844: 170 (Musca (Anthomyia)). Germany. T A Unknown. Anthomyiidae. Preocc. Ratzeburg 1840.

prodeo Harris, 1780: 141, pl. 41, fig. 40 (Musca). England. T♀ Unknown. Muscidae, Muscina stabulans Fallén. Name improperly formed (verb).

prodromaria Panzer, 1804: 160 (Musca). Germany, Regensburg. T A Unknown. proema Walker, 1849: 888 (Musca). Australia. HT ? BMNH. Muscidae, Neomyia lauta Wiedemann. See Pont 1973: 192.

proferens Walker, 1859b: 138 (*Musca*). Sulawesi, Makasar. T & BMNH. Muscidae, *Pyrellia proferens* Walker.

profuges Harris, 1780: 81, pl. 24, fig. 25 (Musca). England, Essex, West Tilbury. T A Unknown. Syrphidae, Doros profuges Harris.

profugus Harris, 1782: index (Musca). Missp. profuges Harris. Syrphidae, Doros profuges Harris.

prolabor Harris, 1780: 139, pl. 41, fig. 31 (*Musca*). England. T A Unknown. Sarcophagidae, *Sarcophaga* sp. Name improperly formed (verb).

prolapsa Harris, 1780: 139, pl. 41, fig. 32 (Musca). England. T Q Unknown. Muscidae, Muscina prolapsa Harris.

prolapsor Harris, 1780: index (Musca). Incosp. prolapsa Harris. Muscidae, Muscina prolapsa Harris.

promano Harris, 1780: 143, pl. 42, fig. 47 (Musca). England. T A Unknown. Tachinidae, Dufouria chalybeata Meigen. Name improperly formed (verb).

promans Harris, 1780: 143 (*Musca*). Incosp. *promano* Harris. Tachinidae, *Dufouria chalybeata* Meigen. Name status by present revision.

promisca Awati, 1916b: 138 (Musca). India. ST ♂♀ CRIK. Muscidae, Musca sorbens Wiedemann.

promittens Walker, 1859b: 134 (Musca). Sulawesi, Makasar. T A BMNH. Calliphoridae, Phumosia promittens Walker.

properans Rossi, 1794: 74 (Musca). Italy. T A ZMHU. Platypezidae, Platypeza fasciata? Meigen.

prospera Walker, 1859b: 133 (Musca). Sulawesi, Makasar. LT & BMNH. Calliphoridae, Silbomyia albonotata Bigot. Lectotype designated by Crosskey 1965: 56.

prostrata Scopoli, 1763: 328 (Musca). Carniola. T Q DESTROY. Muscidae, Musca autumnalis De Geer.

provenio Harris, 1780: 142, pl. 41, fig. 43 (*Musca*). England. T A Unknown. Tachinidae, *Dexia rustica* Fabricius. Name improperly formed (verb).

proxima Walker, 1853b: 341 (Musca). California. T 

BMNH. Calliphoridae, Phormia regina Meigen.

pruinosa Meigen, 1838: 306 (Musca). Subsequent Usage of Pollenia pruinosa Macquart. Calliphoridae, Pollenia rudis Fabricius.

pseudocorvina Emden, 1939: 80 (Musca, as autumnalis ssp.). Kenya, Aberdare Range, Mt Kinangop. HT & BMNH. Muscidae, Musca pseudocorvina Emden. See Pont 1990: 168.

psyllia Schrank, 1803: 127 (Musca). Germany, Bavaria, Ingolstadt. T A Unknown. puber Gmelin, 1790: 2850 (Musca). Missp. pubera Linnaeus. Scathophagidae, Cordilura pubera Linnaeus.

pubera Linnaeus, 1758a: 598 (Musca). Europe. T A LSL. Scathophagidae, Cordilura pubera Linnaeus. 4 sp. in LSL (Dear MS).

puberula Zetterstedt, 1837: 42 (Musca). Nomen nudum. [Sweden, Nordlandia, Tromsø]. T & ZIL. Calliphoridae, Bellardia pubicornis Zetterstedt.

puberula Zetterstedt, 1838: 654 (Musca). Norway, Nordlandia, Tromsø. LT & ZIL. Calliphoridae, Bellardia pubicornis Zetterstedt. Lectotype designated by Rognes 1991a: 51.

pubiceps Zetterstedt, 1845: 1333 (Musca). Sweden, Luleå. T A ZIL. Tachinidae, Macquartia pubiceps Zetterstedt.

pudefactus Harris, 1780: 121, pl. 35, fig. 42 (*Musca*). England. T A Unknown. Anthomyiidae.

puella Meigen, 1826: 57 (Musca). Germany, probably Kiel. HT ♂ NMW. Muscidae, Neomyia cornicina Fabricius. See Pont 1986b: 241.

pulchella Müller, 1776: 174 (Musca). Denmark. T A Author. Chloropidae, Chlorops pulchella Müller. N. Comb.

pulchella Rossi, 1790: 314, pl. 8, fig. 6 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU. Pallopteridae, Palloptera muliebris Harris. Preocc. Müller 1776.

pulchra Wiedemann, 1830: 406 (Musca). Unknown. T A NMW. Calliphoridae, Hemipyrellia pulchra Wiedemann.

pulicaria Geoffroy, 1785: 498 (Musca). France, Paris. T A Author.

pulicaria Schrank, 1803: 126 (Musca). Germany, Bavaria. T A Unknown. Preocc. Geoffroy 1785.

pulla Gmelin, 1790: 2859 (Musca). Europe. T A NMI. Syrphidae.

pulla Bezzi, 1911: 92 (Musca). South Africa, Pretoria. HT & USNM. Muscidae, Musca conducens Walker. Preocc. Gmelin 1790. pullata Müller, 1764: 86 (Musca). Denmark, Sjaelland, Frederiksdal. T A DE-STROY.

pumila Fallén, 1825: 88 (*Musca*). Sweden. LT ♂ NRS. Muscidae, *Coenosia pumila* Fallén: Lectotype designated by Pont 1984: 291.

pumila Meigen, 1838: 307 (*Musca*). Subsequent Usage of *Pollenia pumila* Robineau-Desvoidy. Calliphoridae, *Pollenia rudis* Fabricius.

pumila Macquart, 1848: 218, pl. 6, fig. 12 (Musca). Australia. HT & BMNH. Muscidae, Musca vetustissima Walker. Preocc. Fallén 1825. See Pont 1990: 168. pumilionis Bjerkander, 1778: 201 (Musca). Sweden. TA UNKNOWN. Chloropidae,

Chlorops pumilionis Bjerkander.

pumilionis Banks, 1791: 2 (Musca). England. T A BMNH B. Chloropidae, Chlorops pumilionis Bjerkander. Preocc. Bjerkander 1778. N. Syn.

punctata Poda, 1761: 116 (Musca). Austria, Graz. T A Unknown.

punctata Müller, 1764: 85 (Musca). Denmark. T A DESTROY. Syrphidae, Eristalinus aeneus Scopoli. Preocc. Poda 1761.

punctata Schrank, 1781: 474 (Musca). Austria, Vienna. T A Unknown. Tephritidae, Orellia stictica Gmelin. Preocc. Poda 1761. N. Comb.

punctata Fabricius, 1794: 347 (Musca). Germany, Kiel. T A UZMC F. Sciomyzidae, Pherbellia schoenherri Fallén. Preocc. Poda 1761.

punctata Walker, 1849: 868 (Musca). Subsequent Usage of Ormia punctata Robineau-Desvoidy. Tachinidae, Ormia punctata Robineau-Desvoidy.

punctatus Fabricius, 1787: 333 (Rhagio). Germany, Kiel. T A UZMC F. Anisopodidae, Sylvicola punctatus Fabricius.

punctifera Geoffroy, 1785: 473 (Musca). France, Paris. T A Author.

punctulata Scopoli, 1763: 338 (Musca). Idrija. T A DESTROY. Sciomyzidae, Trypetoptera punctulata Scopoli.

punctulata Wiedemann, 1819a: 21 (Musca). South Africa, Cape of Good Hope. HT
 UZMC. Calliphoridae, Cosmina fuscipennis Robineau-Desvoidy. Preocc.
 Scopoli 1763. See Townsend 1931c: 372.

punctum Fabricius, 1794: 351 (Musca). France. T A MNHNP. Sepsidae, Sepsis

punctum Fabricius.

pungens De Geer, 1776: 78, pl. 4, fig. 12 (Musca). N. n. Conops calcitrans Linnaeus. Muscidae, Stomoxys calcitrans Linnaeus.

pungoana Karsch, 1886: 259 (Musca). Angola, Pungo Andongo. T ♀ ZMHU. Muscidae, Musca ventrosa Wiedemann.

puparum Fabricius, 1794: 326 (Musca). Germany, Kiel. T A UZMC F. Tachinidae, Ernestia puparum Fabricius.

purmundus Harris, 1780: 74, pl. 21, fig. 6 (Musca). England, Kent, Dartford. T A Unknown. Tephritidae, Anomoia purmundus Harris.

purpurascens Walker, 1836: 355 (Musca). Brazil, Santa Catarina. T ♀ BMNH. Calliphoridae, Lucilia purpurascens Walker.

purpurea Walker, 1853b: 337 (Musca). South America. T & BMNH. Calliphoridae, Chloroprocta idioidea Robineau-Desvoidy.

pusilla Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Paragus sp. pusilla Meigen, 1826: 71 (Musca). Germany, Stolberg. LT & MNHNP. Calliphoridae, Bellardia viarum Robineau-Desvoidy. Preocc. Gmelin 1790. Lectotype designated by Rognes 1991a: 40. N. Comb.

pusilla Macquart, 1848: 219 (Musca). Haiti. T & BMNH. Sarcophagidae, Anapunophyto lopesi Thompson & Pont. Preocc. Gmelin 1790. See Lopes 1975: 541.

pusilla Macquart, 1851: 226 (Musca). Egypt. T & UMO. Muscidae, Musca sorbens Wiedemann. Preocc. Gmelin 1790.

pusilla Rondani, 1868: 602 (Musca). Nomen nudum. Muscidae, Musca tempestiva Fallén.

pusillus Fabricius, 1794: 271 (Nemotelus). India, Tranquebar. T- A UZMC F. Stratiomyidae, Oplodontha minuta Fabricius.

putoria Wiedemann, 1830: 403 (Musca). Sierra Leone. T A NMW. Calliphoridae, Chrysomya chloropyga Wiedemann.

putrida Fabricius, 1775: 775 (Musca). America. T A Auction. Calliphoridae. Type(s) originally in collection of Otto Thott.

putrida Fabricius, 1794: 316 (Musca). West Indies. T A UZMC F. Preocc. Fabricius 1775.

putris Linnaeus, 1758a: 597 (*Musca*). Europe. T A LSL. Sepsidae, *Themira putris* Linnaeus, 2 sp. in LSL (Dear MS).

putris Geoffroy, 1785: 490 (Musca). France, Paris & Sweden? T A Author. Preocc. Linnaeus 1758.

pyrastri Linnaeus, 1758a: 594 (*Musca*). Sweden. LT & LSL. Syrphidae, *Scaeva pyrastri* Linnaeus. Lectotype designated by Thompson *et al.* 1982: 159.

pyrorun Schrank, 1803: 114 (Musca). Germany, Bavaria. T A Unknown. Syrphidae, Dasysyrphus pinastri De Geer.

As Schrank included a reference to *Musca pinastri* De Geer in his definition of *pyrorum*, we select as lectotype of *pyrorum* the specimen illustrated by De Geer (De Geer 1776: pl. 7, fig. 1).

quadrata Geoffroy, 1785: 485 (Musca). France, Paris. T A Author. quadricolor Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

quadrifasciata Fabricius, 1781: 448 (Musca). Germany. T A UZMC F. Dolichopodidae, Neurigona quadrifasciata Fabricius.

quadrifasciata Geoffroy, 1785: 473 (Musca). France, Paris. T A Author. Preocc. Fabricius 1781.

quadrilineata Gmelin, 1790: 2835 (Musca). Subsequent Usage of Stratiomys quadrilineata Fabricius. Stratiomyidae, Isomerocera quadrilineata Fabricius.

quadrilineata Lichtenstein, 1796: 216 (Musca). India, Coromandel. T A Auction.
quadrilineata Fabricius, 1805: 286 (Musca). South America. HT A UZMC. Calliphoridae, Eumesembrinella flavipennis Macquart. Preocc. Lichtenstein 1796. See Townsend 1931a: 69. N. Syn.

quadrilineatus Fabricius, 1787: 336 (Syrphus). India, Tranquebar. T A UZMC. Syrphidae, Eristalinus arvorum Fabricius.

quadrimaculata Fabricius, 1787: 347 (Musca). Germany, Kiel. T A UZMC F. Preocc. Swederus 1787.

quadrimaculata Swederus, 1787: 289 (Musca). New Zealand. HT & BMNH B. Calliphoridae, Calliphora quadrimaculata Swederus. See Townsend 1931c: 375; Dear 1985a: 23.

quadrimaculata Fallén, 1823: 63 (Musca). Sweden, Skåne. LT ♂ NRS. Muscidae, Helina celsa Harris. Preocc. Swederus 1787. Lectotype designated by Pont 1984: 292.

- quadrimaculella Hennig, 1958: 213 (Helina). N. n. Musca quadrimaculata Fallén. Muscidae, Helina celsa Harris.
- quadripunctata Linnaeus, 1767: 997 (Musca). Sweden. NT & LSL. Lauxaniidae, Sapromyza quadripunctata Linnaeus. Neotype designation (Yarom 1990: 290).
- quadripustulata Fabricius, 1794: 324 (Musca). Germany. T A DESTROY. Tachinidae, Winthemia quadripustulata Fabricius. See Townsend 1932: 48.
- quadristrigata Donovan, 1808: 72, pl. 467, fig. 3 (Musca). England. T A UN-KNOWN. Chloropidae, Chlorops quadristrigata Donovan. N. Comb.
- quadrum Fabricius, 1805: 297 (Musca). Austria. HT A UZMC F. Muscidae, Helina quadrum Fabricius. See Michelsen 1979a: 188.
- quinquefasciata Geoffroy, 1785: 474 (Musca). France, Paris. T A Author.
- quinquelineata Gmelin, 1790: 2870 (Musca). Subsequent Usage of Syrphus quinquelineatus Fabricius. Syrphidae, Eristalinus quinquelineatus Fabricius.
- quinquepunctata Schrank, 1781: 473 (Musca). Austria. T A Unknown.
- quinquestriata Turton, 1801: 642 (Musca). Subsequent Usage of Syrphus quinquestriatus Fabricius. Syrphidae, Eristalinus quinquestriatus Fabricius.
- racilia Walker, 1849: 884 (Musca). Sierra Leone. T & BMNH. Muscidae, Neomyia racilia Walker.
- radiata Fabricius, 1798: 565 (*Musca*). France, Paris. T A UZMC F. Tephritidae, *Trupanea radiata* Fabricius.
- radiata Walckenaer, 1802: 399 (Musca). France, Paris. T A Unknown. Tephritidae, Trupanea radiata Fabricius. Preocc. Fabricius 1798. Probably the lack of attribution was an error.
- radicum Linnaeus, 1758a: 596 (Musca). Sweden. HT & LSL. Anthomyiidae, Delia radicum Linnaeus. See Pont 1981: 173.
- rapax Harris, 1780: 144, pl. 42, fig. 55 (*Musca*). England. T  $\circ$  Unknown. Muscidae, *Pyrellia rapax* Harris.
- rapax Gmelin, 1790: 2848 (Musca). N. n. Musca tigrina Fabricius. Muscidae, Coenosia tigrina Fabricius. Preocc. Harris 1780.
- rara Scopoli, 1763: 339 (Musca). Middle Carniola. T A DESTROY. Stratiomyidae, Oxycera rara Scopoli.
- rau Robineau-Desvoidy, 1830: 396 (Musca). Missp. tau Schrank. Muscidae, Musca autumnalis De Geer.
- reccumbo Harris, 1776: 35, pl. 9, fig. 4 (*Musca*). England. Tachinidae, *Tachina fera* Linnaeus. Name improperly formed (verb).
- recedans Harris, 1780: 144, pl. 42, fig. 58 (Musca). England. T A Unknown. Tachinidae.
- recta Meigen, 1838: 308 (*Musca*). Subsequent Usage of *Pollenia recta* Macquart. Calliphoridae, *Pollenia rudis* Fabricius.
- recurro Harris, 1780: 85, pl. 25, fig. 17 (*Musca*). England. Calliphoridae, *Pollenia* sp. Name improperly formed (verb).
- redambulo Harris, 1780: 141, pl. 41, fig. 38 (Musca). England. Tachinidae, Ernestia sp. Name improperly formed (verb).
- redeans Harris, 1782: index (Musca). Missp. redians Harris. Tachinidae.
- redeo Harris, 1780: 140, pl. 41, fig. 34 (Musca). England. T ♀ Unknown. Muscidae, Neomyia cornicina Fabricius. Name improperly formed (verb).
- redians Harris, 1780: 145, pl. 42, fig. 59 (Musca). England. T A Unknown. Tachinidae.

reditus Harris, 1780: 146, pl. 43, fig. 61 (Musca). England. T A Unknown. Anthomyiidae.

refixa Walker, 1856a: 26 (Musca). Singapore. T Q BMNH. Muscidae, Neomyia diffidens Walker.

reflectens Walker, 1856a: 24 (Musca). Malacca. T & BMNH. Calliphoridae, Isomyia viredaurea Wiedemann.

regalis Meigen, 1826: 54 (Musca). Germany. ST ♂ NMW. Calliphoridae, Lucilia regalis Meigen. See Collin 1926: 258.

regalis Guérin-Méneville, 1831: , pl. 21, fig. 1 (Rutilia). Australia, A.C.T., Tharwa. NT & ANIC. Tachinidae, Rutilia regalis Guérin-Méneville. Neotype designated by Crosskey 1973: 126.

regalis Guérin-Méneville, 1838: 295 (Musca). Subsequent Usage of Rutilia regalis

Guérin-Méneville. Tachinidae, Rutilia regalis Guérin-Méneville.

regina Meigen, 1826: 58 (Musca). Germany, Stolberg. LT & MNHNP. Calliphoridae, *Phormia regina* Meigen. Lectotype designated by Rognes 1991a: 106. 1st revisor Seguy 1928: 169.

relictus Harris, 1780: 120, pl. 35, fig. 35 (Musca). England. T A Unknown. Coelopi-

dae.

remigro Harris, 1780: 140, pl. 41, fig. 36 (*Musca*). England. T A Unknown. Calliphoridae, *Pollenia rudis* Fabricius. Name improperly formed (verb).

remuria Walker, 1849: 871 (Musca). China. T ♀ BMNH. Calliphoridae, Chrysomya megacephala Fabricius.

repens Harris, 1776: 37, pl. 9, fig. 10 (Musca). England. T A Unknown. Tachinidae. rerumbo Harris, 1780: 74 (Musca). Missp. reccumbo Harris. Tachinidae, Tachina fera Linnaeus.

resinellae Schrank, 1781: 478 (Musca). Austria. T A Unknown. Tachinidae, Actia nudibasis Stein.

resinosa Presl, 1822: 207 (Musca). Ligurian Prussian Amber. T A Unknown.

restitituo Harris, 1780: index (Musca). Missp. restituo Harris. Muscidae, Musca autumnalis De Geer.

restituo Harris, 1776: 36, pl. 9, fig. 5 (Musca). England. Muscidae, Musca autumnalis De Geer. Name improperly formed (verb).

reticulata Fabricius, 1781: 450 (Musca). Italy. T A UZMC F. Sciomyzidae, Pherbina coryleti Scopoli.

reticulata Geoffroy, 1785: 472 (Musca). France, Paris. T A Author. Preoce. Fabricius 1781.

retusa Fabricius, 1775: 775 (Musca). Australia. HT & BMNHB. Tachinidae, Rutilia retusa Fabricius. See Crosskey 1973a: 137.

reversio Harris, 1780: 146, pl. 43, fig. 62 (Musca). England. T \( \text{Y} \) Unknown. Muscidae, Helina reversio Harris.

reverto Harris, 1780: 140, pl. 41, fig. 35 (Musca). England. T A Unknown. Sarcophagidae, Sarcophaga sp. Name improperly formed (verb).

reviso Harris, 1780: 141, pl. 41, fig. 39 (Musca). England. T A Unknown. Calliphoridae, Protocalliphora azurea Fallén. Name improperly formed (verb).

revolo Harris, 1780: 124, pl. 36, fig. 51 (Musca). England. T & Unknown. Muscidae, Helina impuncta Fallén. Name improperly formed (verb).

rex Poda, 1761: 114 (Musca). Austria, Graz. T A Unknown. Stratiomyidae, Beris sp.

ribesii Linnaeus, 1758a: 593 (Musca). Sweden. LT & LSL. Syrphidae, Syrphus ribesii Linnaeus. Lectotype designated by Thompson et al. 1982: 159.

riparia Fallén, 1824: 67 (Musca). Sweden. LT & NRS. Muscidae, Limnophora riparia Fallén. Lectotype designated by Pont 1984: 292.

riparia Robineau-Desvoidy, 1830: 398 (Musca). France. T ♀ DESTROY. Muscidae, Musca autumnalis De Geer. Preocc. Fallén 1824.

rivularis Robineau-Desvoidy, 1863: 627 (Musca). France, Var. T Q DESTROY. Muscidae, Musca domestica Linnaeus.

roralis Linnaeus, 1758a: 597 (Musca). Europe. HT ♀ LSL. Rhinophoridae, Melanophora roralis Linnaeus. See Crosskey 1977: 51.

roralis Bloch, 1776: 170, pl. 3, fig. 9 (Musca). Subsequent Usage of Musca roralis Linnaeus. Rhinophoridae, Melanophora roralis Linnaeus.

rosae De Geer, 1776: 108, pl. 6, fig. 21 (Musca). N. n. Musca pyrastri Linnaeus. Syrphidae, Scaeva pyrastri Linnaeus.

rosae Fabricius, 1794: 356 (Musca). Germany, Kiel. T A UZMC F. Psilidae, Chamaepsila hennigi Thompson & Pont. Preocc. De Geer 1776.

rosarum Gmelin, 1790: 2877 (Musca). Subsequent Usage of Syrphus rosarum Fabricius. Syrphidae, Platycheirus rosarum Fabricius.

rostrata Fabricius, 1775: 783 (Musca). Denmark, Copenhagen. T A UZMC F. Dolichopodidae, Medetera diadema Linnaeus.

rostrata De Geer, 1776: 130 (Musca). Subsequent Usage of Conops rostrata Linnaeus. Syrphidae, Rhingia rostrata Linnaeus.

rostrata Preyssler, 1791: 113 (Musca). Subsequent Usage of Musca rostrata Fabricius. Dolichopodidae, Medetera diadema Linnaeus.

rotundata Linnaeus, 1758a: 596 (Musca). Europe. T A LSL. Tachinidae, Gymnosoma rotundatum Linnaeus. 1 sp. in LSL (Dear MS).

rubiginea Schrank, 1803: 116 (Musca). Germany, Bavaria, Ingolstadt. T A Unknown. Syrphidae.

rubiginosa Gmelin, 1790: 2878 (Musca). Non-European. T A NMI. Syrphidae.

rubripes Gmelin, 1790: 2862 (Musca). Europe. T A NMI.

rudis Fabricius, 1794: 314 (*Musca*). Germany, Schleswig-Holstein, Gromitz. NT & UZMC F. Calliphoridae, *Pollenia rudis* Fabricius. Neotype designated by Rognes 1987b: 498.

rufa Scopoli, 1763: 335 (Musca). Carniola. T A DESTROY. Psilidae, Psila fimetaria Linnaeus.

rufa De Geer, 1776: 96, pl. 5, fig. 17 (Musca). Sweden. T A NRS. Psilidae? Preocc. Scopoli 1763.

rufa de Villers, 1789a: 418 (Musca). Subsequent Usage of Nemotelus rufus De Geer. rufa Panzer, 1798a: 17 (Musca). Austria. T A ZMHU. Sciomyzidae, Elgiva solicita Harris. Preocc. Scopoli 1763.

ruficapilla Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

ruficauda Fabricius, 1794: 353 (Musca). France. T A MNHNP. Tephritidae, Terellia ruficauda Fabricius.

ruficaudis De Geer, 1776: 127 (Musca). N. n. Musca fallax Linnaeus. Syrphidae, Blera fallax Linnaeus.

ruficeps Fabricius, 1805: 299 (Musca). Southern France. HT Q UZMC. Calliphoridae, Rhyncomya ruficeps Fabricius. See Townsend 1931c: 372.

ruficeps Meigen, 1826: 55 (Musca). Germany, Stolberg. TAMNHNP. Calliphoridae, Lucilia caesar Linnaeus. Preocc. Fabricius 1805.

ruficeps Meigen, 1838: 306 (Musca). N. n. Pollenia violacea Macquart. Calliphoridae, Pollenia sp. Preocc. Fabricius 1805.

ruficornis Gmelin, 1790: 2874 (Musca). Subsequent Usage of Syrphus ruficornis Fabricius. Syrphidae, Ferdinandea ruficornis Fabricius.

ruficornis Fabricius, 1794: 314 (*Musca*). India Orientali. LT ♀ UZMC. Sarcophagidae, *Parasarcophaga ruficornis* Fabricius. Lectotype designated by Pape 1986: 302.

ruficornis Meigen, 1838: 306 (Musca). Subsequent Usage of Pollenia ruficornis Macquart. Calliphoridae, Pollenia vespillo Fabricius.

ruficornis Walker, 1858a: 215 (Musca). Tasmania. T 9 BMNH. Calliphoridae, Onesia pubescens Macquart. Preocc. Fabricius 1794.

ruficrus Ratzeburg, 1844: 174 (*Musca (Tachina*)). Germany. T A UNKNOWN. Tachinidae.

rufifrons Fabricius, 1781: 449 (Musca). Italy. T A UZMC F. Sciomyzidae, Euthycera fumigata Scopoli.

rufifrons Fabricius, 1805: 295 (Musca). Guinea. HT & UZMC. Sarcophagidae, Craticulina seriata Speiser. Preocc. Fabricius 1781. See Townsend 1931c: 379; Pape 1986: 302.

rufifrons Macquart, 1843: 309 (Musca). Java. T 

MNHNP. Muscidae, Musca domestica Linnaeus. Preocc. Fabricius 1781.

rufina Fallén, 1825: 92 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Pegomya rufina Fallén. Lectotype designated by Michelsen 1983: 114.

rufipalpis Meigen, 1838: 307 (Musca). Subsequent Usage of Pollenia rufipalpis Macquart. Calliphoridae, Pollenia rudis Fabricius.

rufipes Panzer, 1798c: 23 (Musca). Germany, Nuremberg. T A ZMHU. Sciomyzidae, Sepedon sphegeus Fabricius.

rufipes Fallén, 1825: 85 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Pegomya zonata Zetterstedt. Preocc. Panzer 1798. Lectotype designated by Michelsen 1983: 114.

rufipes Descourtilz, 1826: 157, pl. 1, fig. 2 (Musca). France, "les bois de Meudon". T ♂ UNKNOWN. Preocc. Panzer 1798.

rufipes Eversmann, 1834: 428 (*Musca*). *Nomen nudum*. USSR, Volga to Urals. T A UNKNOWN. Calliphoridae. Published without diagnosis or indication.

rufiventris Scopoli, 1763: 329 (Musca). Carniola. T A DESTROY. Muscidae, Phaonia rufiventris Scopoli.

rufiventris Gmelin, 1790: 2859 (Musca). Europe. T A NMI. Preocc. Scopoli 1763.

rufiventris Fallén, 1817: 239 (Musca). Sweden, Kalmar. T A NRS. Tachinidae, Mintho rufiventris Fallén. Preocc. Scopoli 1763. N. Comb.

rufiventris Macquart, 1843: 312, pl. 20, fig. 9 (Musca). America (=Mauritius). T & MNHNP. Muscidae, Musca xanthomelaena Wiedemann. Preocc. Scopoli 1763.

rufiventris Macquart, 1846: 328, pl. 17, fig. 8 (Musca). Brazil. LT & BMNH. Muscidae, Musca domestica Linnaeus. Preocc. Scopoli 1763. Lectotype designated by Pont 1990: 168.

rufomaculata De Geer, 1776: 28, pl. 1, fig. 10 (Musca). Sweden. T A NRS. Tachinidae, Eriothrix rufomaculata De Geer.

- rugosa Fabricius, 1794: 330 (Musca). Germany, Kiel. T A UZMC F. Scenopinidae, Scenopinus niger De Geer.
- rumicis Sommerfelt, 1827: 99 (Musca). Norway, S. Norrland, Saltdalen. T A UN-KNOWN. Anthomyiidae, *Pegomya solennis* Meigen. See Michelsen 1985: 52.
- ruralis Gravenhorst, 1807: 379 (Musca). Unknown, probably Germany. T A Lost. Muscidae.
- ruralis Fallén, 1817: 237 (Musca). Sweden, Skåne. LT ♂ NRS. Sarcophagidae, Angiometopa falleni Pape. Preocc. Gravenhorst 1807. Lectotype designated by Pape 1986: 306.
- rustica Fabricius, 1775: 777 (Musca). Denmark, Copenhagen. T A UZMC F. Tachinidae, Dexia rustica Fabricius.
- rustica Schrank, 1803: 120 (Musca). Germany, Pottmes. T A Unknown. Tachinidae? Preocc. Fabricius 1775.
- rustica Fallén, 1825: 79 (Musca, as angelicae var. β). Sweden. LT δ NRS. Muscidae, Mydaea urbana Meigen. Preocc. Fabricius 1775. Lectotype designated by Pont 1984: 292.
- rustica Robineau-Desvoidy, 1863: 622 (Musca). France, Paris. T A DESTROY. Muscidae, Musca autumnalis De Geer. Preocc. Fabricius 1775.
- rutilans Fabricius, 1781: 436 (Musca). West Indies. T A UZMC F. Tachinidae, Billaea rutilans Fabricius. Types not found by Townsend 1931a: 102.
- rutillus Harris, 1780: 86, pl. 25, fig. 20 (Musca). England. T A Unknown. Tachinidae, Mintho praeceps Scopoli.
- rutilo Harris, 1780: 80, pl. 24, fig. 21 (*Musca*). England. T A Unknown. Syrphidae, *Ferdinandea cuprea* Scopoli. Name improperly formed (verb).
- sabaeus Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio sabaeus Fabricius. Bombyliidae, Lomatia sabaeus Fabricius.
- sacalis Bjerkander, 1783: 102 (Musca). Sweden. T A UNKNOWN.
- sacra Fabricius, 1805: 291 (Musca). [South Africa, Cape of Good Hope] Error for New Zealand. HT Q UZMC. Calliphoridae, Calliphora quadrimaculata Swederus. See Townsend 1931c: 375; Dear 1985a: 23.
- saltatrix Linnaeus, 1761: 555 (Musca). Sweden. T A LSL. Chloropidae, Meromyza saltatrix Linnaeus. 1 sp. in LSL (Dear MS).
- saltatrix Geoffroy, 1785: 480 (Musca). France, Paris. T A Author. Chloropidae, Chlorops pumilionis Bjerkander. Preocc. Linnaeus 1758. N. Syn.
- saltitans Scopoli, 1763: 350 (Musca). Carniola. T A DESTROY. Scenopinidae, Scenopinus fenestralis Linnaeus.
- saltuum Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Pallopteridae, Palloptera saltuum Linnaeus. 1 sp. in LSL (Dear MS).
- salviae Gmelin, 1790: 2877 (Musca). Subsequent Usage of Syrphus salviae Fabricius. Syrphidae, Asarkina salviae Fabricius.
- sanctae-helenae Macquart, 1848: 218, pl. 6, fig. 14 (Musca). Saint Helena. LT & IRSNB. Muscidae, Musca domestica Linnaeus. Lectotype designated by Pont 1977a: 127.
- sandaracha Harris, 1780: 119, pl. 35, fig. 30 (Musca). England. T A Unknown. Heleomyzidae.
- sanio Harris, 1780: index (*Musca*). Incosp. sannio Harris. Dolichopodidae. Name improperly formed (verb). Name status by present revision.
- saniosa Westring, 1814: 56, pl. 4b (Musca). Sweden. T A NRS. Sphaeroceridae.

sannio Harris, 1780: 158, pl. 47, fig. 5 (*Musca*). England. T A Unknown. Dolichopodidae. Name improperly formed (verb).

santoshi Joseph & Parui, 1972: 180 (Musca). India, NEFA, Kambang. HT & ZSI. Muscidae. Musca santoshi Joseph & Parui.

sarcophagoides Walker, 1861b: 244 (Musca). New Guinea, Dorey. T & BMNH.

Calliphoridae, Polleniopsis sarcophagoides Walker. sarsina Walker, 1849: 882 (Musca). South Africa. T ? BMNH. Muscidae, Neomyia

peronii Robineau-Desvoidy. satyrus Gmelin, 1790: 2831 (Musca). Subsequent Usage of Bibio satyrus Fabricius.

Bombyliidae, Ligyra satyrus Fabricius.

scabiosae Fabricius, 1794: 361 (Musca). France. T A MNHNP. Tephritidae.

scalaris Fabricius, 1794: 332 (Musca). Denmark, Copenhagen. LT & UZMC. Fanniidae, Fannia scalaris Fabricius. Lectotype designated by Michelsen 1979a: 188.

scapularis Rondani, 1875: 428 (Musca). Borneo, Sarawak. T & MCSNG. Muscidae, Musca conducens Walker.

scatophaga Malloch, 1925: 373 (Musca). South Africa, Cape Province, Prospect. HT & BMNH. Muscidae, Musca aethiops Stein. See Pont 1990: 169.

scitule Harris, 1780: 111, pl. 33, fig. 55 (Musca). England. T A Unknown. Syrphidae, Episyrphus cannabina Scopoli. Name improperly formed (adverb).

scitulus Harris, 1780: 105, pl. 32, fig. 33 (Musca). England. T A Unknown. Syrphidae, Episyrphus cannabina Scopoli.

scitus Harris, 1780: 107, pl. 32, fig. 41 (Musca). England. T A Unknown. Syrphidae, Tropidia scita Harris.

scolopacea Linnaeus, 1758a: 590 (Musca). Europe. T A LSL. Rhagionidae, Rhagio scolopaceus Linnaeus. 3 sp. in LSL (Dear MS).

scolopacina de Villers, 1789a: 429 (*Musca*). France, Bressia [= Bresse]. T A Author. scripta Linnaeus, 1758a: 594 (*Musca*). Sweden. LT & LSL. Syrphidae, *Sphaerophoria scripta* Linnaeus. Lectotype designated by Vockeroth 1971: 1634.

scutata Rossi, 1790: 314 (Musca). Italy, Tuscany, Firenze & Pisa. T A ZMHU.

Chloropidae, Capnoptera scutata Rossi.

scutellaris Fabricius, 1805: 293 (Musca). South America. LT & UZMC. Muscidae, Scutellomusca scutellaris Fabricius. Lectotype designated by Michelsen 1979a: 188 (HT designation Townsend 1931a: 68).

scutellaris Fallén, 1825: 90 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Phaonia rufiventris Scopoli. Preocc. Fabricius 1805. Lectotype designated by

Pont 1984: 293.

scutellata Meigen, 1838: 304 (Musca). Subsequent Usage of Calliphora scutellata Macquart. Calliphoridae, Calliphora vicina Robineau-Desvoidy.

scybalaria Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Scathophagidae, Scathophaga scybalaria Linnaeus. 4 sp. in LSL (Dear MS).

secalis Bjerkander, 1777: 30 (Musca). Sweden. T A UNKNOWN.

seelandica Gmelin, 1790: 2870 (Musca). N. n. Syrphus trilineatus Fabricius. Syrphidae, Helophilus seelandicus Gmelin.

segetum Turton, 1801: 641 (Musca). Subsequent Usage of Syrphus segetum Fabricius. Syrphidae, Merodon segetum Fabricius.

segmentaria Panzer, 1804: 140 (Musca). Germany, Regensburg. T A Unknown.

- segmentaria Fabricius, 1805: 292 (Musca). South America. HT Q UZMC. Calliphoridae, Hemilucilia nubipennis Rondani. Preocc. Panzer 1804. See Townsend 1931a: 71; Dear 1985b: 127. N. Syn.
- segnis Linnaeus, 1758a: 595 (Musca). Sweden. LT & LSL. Syrphidae, Xylota segnis Linnaeus. Lectotype designated by Thompson et al. 1982: 160.
- selecta Walker, 1859b: 135 (Musca). Sulawesi, Makasar. T 

  BMNH. Calliphoridae, Isomyia selecta Walker. N. Comb.
- sellata Fuesslin, 1775: 54 (Musca). Switzerland, Zürich & Bundten; Germany, Regensburg. ST A UNKNOWN. Stratiomyidae, Clitellaria ephippium Fabricius. N. Syn.
- semiargentata Donovan, 1795: 92, pl. 142, fig. 3 (Musca). England, Epping Forest. T A UNKNOWN. Dolichopodidae, Argyra leucocephala Meigen.
- semiargentea Turton, 1801: 606 (Musca). Emend. semiargentata Donovan. Dolichopodidae, Argyra leucocephala Meigen.
- semiatra Wiedemann, 1830: 421 (Musca). Brazil. T A UZMC. Cuterebridae, Pseudogametes semiatra Wiedemann. HT designation for male in NMW by Townsend 1931a: 80.
- semicaerulea Stephens, 1829a: 60 (*Musca*). *Nomen nudum*. England. T A BMNH. Calliphoridae:
- semiflava Panzer, 1798b: 9 (Musca). Austria. T 2 ZMHU.
- semiluctifera de Villers, 1789a: 463, pl. 9, fig. 23 (*Musca*). Southern France. T A Author. Syrphidae, *Milesia semiluctifera* de Villers.
- seminationis Fabricius, 1775: 786 (Musca). Germany, Leipzig. T A UZMC F. Platystomatidae, Platystoma seminationis Fabricius.
- semirufa Turton, 1801: 648 (Musca). Subsequent Usage of Syrphus semirufus Fabricius. Syrphidae, Blera fallax Linnaeus.
- semulater Harris, 1780: 112, pl. 33, fig. 58 (Musca). England. T A Unknown. Syrphidae, Xylota sp.
- semulator Harris, 1780: index (*Musca*). Incosp. *semulater* Harris. Syrphidae, *Xylota* sp. Name revised by Goffe 1946: 84.
- senegalensis Macquart, 1843: 308 (Musca). Senegal. T ♂ MNHNP. Muscidae, Musca domestica Linnaeus.
- senilis Fabricius, 1794: 331 (Musca). Germany. T A UZMC F. Scenopinidae, Scenopinus fenestralis Linnaeus.
- senilis Eversmann, 1834: 428 (Musca). Nomen nudum. USSR, Volga to Urals. Muscidae. Published without diagnosis or indication.
- seniorwhitei Patton, 1922b: 73 (*Musca*). India, Krishna River & Kollar Lake. ST A BMNH. Muscidae, *Musca seniorwhitei* Patton. See Pont 1990: 169.
- sensifera Walker, 1861a: 314 (Musca). Mexico. T & BMNH. Tachinidae, Billaea sensifera Walker.
- seplasia Walker, 1849: 891 (Musca). Unknown. T & BMNH. Muscidae, Eudasyphora cyanicolor Zetterstedt.
- sepulchralis Linnaeus, 1758a: 596 (Musca). Sweden. LT & LSL. Syrphidae, Eristalinus sepulchralis Linnaeus. Lectotype designated by Thompson et al. 1982: 160.
- sepulcralis Meigen, 1826: 71 (Musca). Germany. ST A MNHNP. Calliphoridae, Onesia floralis Robineau-Desvoidy. Preocc. Linnaeus 1758.
- serena Fallén, 1825: 76 (Musca). Sweden, Skåne. LT & NRS. Fanniidae, Fannia serena Fallén. Lectotype designated by Pont 1984: 293.

serena Meigen, 1826: 59 (Musca). Germany, probably Stolberg. LT ♀ MNHNP. Muscidae, Pyrellia rapax Harris. Preocc. Fallén 1825. Lectotype designated by Pont 1986b: 243.

serenissima Walker, 1853b: 340 (Musca). East Indies. T ? BMNH. Calliphoridae, Lucilia cuprina Wiedemann.

sericata Meigen, 1826: 53 (Musca). Austria. T P NMW. Calliphoridae, Lucilia sericata Meigen. Type lost (Rognes 1991a: 180).

sericea Geoffroy, 1785: 489 (Musca). France, Paris. T A Author.

sericea Donovan, 1808: 26, pl. 445, fig. 2 (Musca). England, Kent, Faversham. T A UNKNOWN. Tachinidae. Preocc. Geoffroy 1785.

serpo Harris, 1780: 144, pl. 42, fig. 54 (*Musca*). England. Sarcophagidae, *Sarcophaga* sp. Name improperly formed (verb).

serrata Linnaeus, 1758a: 597 (*Musca*). Europe. T A LSL. Heleomyzidae, *Heleomyza serrata* Linnaeus. 1 sp. in LSL (Dear MS).

serratula Manuel, 1811: 35 (Musca). Emend. serratulae Linnaeus. Tephritidae, Terellia serratulae Linnaeus.

serratulae Linnaeus, 1758a; 600 (Musca). Europe. T A LSL. Tephritidae, Terellia serratulae Linnaeus. See White 1987: 104.

serva Walker, 1853b: 349 (Musca). United States. T & BMNH. Calliphoridae, Opsodexia serva Walker. N. Comb.

setaria Rossi, 1788: 130 (Musca). [Italy, Pisa]. T A UNKNOWN.

seticornis Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

setigera Awati, 1916b: 138 (Musca). India. ST Q CRIK. Muscidae, Musca xanthomelaena Wiedemann.

setosa Gmelin, 1790: 2859 (Musca). Europe. T A NMI.

setosa Panzer, 1804: 72 (Musca). Germany, Regensburg. T A Unknown. Preocc. Gmelin 1790.

setosa Presl, 1822: 205 (Musca). Ligurian Prussian Amber. T A Unknown. Preocc. Gmelin 1790.

setulosa Zielke, 1970: 504 (*Musca*). *Nomen nudum*. Uganda, Kichwamba, Ankole. ST & USNM. Muscidae, *Musca setulosa* Zielke. Published after 1930 without a description.

setulosa Zielke, 1971a: 104 (*Musca*). Uganda, 15mi S. Kichwamba, Kalinzu forest, Ankole Distr. HT & USNM. Muscidae, *Musca setulosa* Zielke.

sexdentata Gmelin, 1790: 2836 (Musca). Subsequent Usage of Stratiomys sexdentata Fabricius. Stratiomyidae, Beris chalybata Forster.

sexmaculata Preyssler, 1791: 88, pl. 3, fig. 10 (Musca). Czechoslovakia, Prague, Botanical Garden. T 9 DESTROY. Muscidae, Helina sexmaculata Preyssler. See Rozkosny, Chvála & Pont 1982: 352.

sexpunctata Fabricius, 1805: 300 (Musco). Denmark. HT & UZMC. Sarcophagidae, Pierretia sexpunctata Fabricius. See Pape 1986: 303.

shanghaiensis Ôuchi, 1938a: 5 (Musca). China, Shanghai & Tienmushan. ST ♀ SIE. Muscidae, Musca formosana Malloch.

sigmoidea Geoffroy, 1785: 471 (Musca). France, Paris. T A Author. Acalyptrate.

signata Preyssler, 1791: 95, pl. 3, fig. 12 (Musca). Czechoslovakia, Prague, Botanical Garden. T & DESTROY. Muscidae, Helina celsa Harris. See Rozkosny, Chvála & Pont 1982: 352.

- silentis Harris, 1776: 59, pl. 15, fig. 14 (Musca). England. T & Unknown. Syrphidae, Sericomyia silentis Harris.
- silvarum Meigen, 1826: 53 (Musca). Austria. T ♀ NMW. Calliphoridae, Lucilia silvarum Meigen. Preocc. Linnaeus 1758 (sylvarum). Type lost (Rognes 1991a: 183).
- silvestris Fallén, 1824: 70 (Musca). Sweden, Västergötland. LT 9 NRS. Anthomyidae, Alliopsis silvestris Fallén. Lectotype designated by Michelsen 1983: 115.
- similis Forster, 1770: 15 (Musca). Nomen nudum. England. Stratiomyidae, Beris similis Forster. Published without diagnosis or indication.
- similis Forster, 1771: 97 (Musca). England. T A LSL. Stratiomyidae, Beris similis Forster.
- simulater Harris, 1780: 123, pl. 36, fig. 49 (Musca). England. T A Unknown. Acalyptrate.
- simulator Harris, 1780: index (*Musca*). Incosp. *semulater* Harris. Syrphidae, *Xylota* sp. Name revised by Goffe 1946: 85.
- simulator Harris, 1780: 152, pl. 45, fig. 77 (Musca). England. T A Unknown. Coelopidae.
- simulator Harris, 1780: index (*Musca*). Incosp. *simulater* Harris. Acalyptrate. Name status by present revision.
- sinensis Gmelin, 1790: 2872 (Musca). N. n. Syrphus zonatus Fabricius. Syrphidae, Phytomia zonata Fabricius.
- singenesiae Manuel, 1811: 37 (Musca). Emend. syngenesiae Fabricius. Platystomatidae, Rivellia syngenesiae Fabricius.
- singularius Harris, 1776: 45, pl. 11, fig. 2 (Musca). England. T A Unknown. Stratiomyidae, Stratiomys singularior Harris.
- sinuata Donovan, 1805: 88, pl. 41 (Musca). Australia. T A Author. Tachinidae, Microtropesa sinuata Donovan. See Townsend 1932: 40 (HT F in BMNH!), Crosskey 1973b: 135.
- sinuata Wiedemann, 1830: 384 (Musca). Subsequent Usage of Musca sinuata Donovan. Tachinidae, Microtropesa sinuata Donovan.
- smaragdina Geoffroy, 1785: 492 (Musca). France, Paris. T A Author.
- socia Fallén, 1825: 82 (*Musca*). Sweden, Skåne. LT P NRS. Anthomyiidae, *Emmesomyia socia* Fallén. Lectotype designated by Michelsen 1983: 115.
- socio Harris, 1780: 147, pl. 43, fig. 69 (*Musca*). England. T A Unknown. Fanniidae, *Fannia canicularis* Linnaeus. Name improperly formed (verb).
- solaia Walker, 1849: 887 (Musca). Australia. T 

  BMNH. Calliphoridae, Hemipyrellia ligurriens Wiedemann.
- solicitus Harris, 1780: 116, pl. 34, fig. 18 (*Musca*). England. T A Unknown. Sciomyzidae, *Elgiva solicita* Harris.
- solivagus Harris, 1780: 85, pl. 25, fig. 15 (Musca). England. T A Unknown. Tachinidae, Thelaira solivaga Harris.
- solor Harris, 1780: 146, pl. 43, fig. 65 (*Musca*). England. T A Unknown. Anthomyidae. Name improperly formed (verb).
- solstitialis Linnaeus, 1758a: 601 (Musca). Europe. T A LSL. Tephritidae, Urophora solstitialis Linnaeus. See White 1987: 105.
- solstitialis, Sulzer, 1776: 216 (Musca). Switzerland. T A UNKNOWN. Preocc. Linnaeus 1758.

somalorum Bezzi, 1892: 190 (Musca, as corvina var.). Somalia, Obbia, Uebi. T Q MCSNM. Muscidae, Musca somalorum Bezzi.

sonchi Linnaeus, 1767: 998 (Musca). Europe. T A LSL. Tephritidae, Ensina sonchi Linnaeus. See White 1987: 105.

sorbens Wiedemann, 1830: 418 (Musca). Sierra Leone. HT ? NMW. Muscidae, Musca sorbens Wiedemann. See Pont 1973: 289.

sordida Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

sordida Zetterstedt, 1837: 42 (Musca). Nomen nudum. [Sweden, Lycksele]. T \( \text{ZIL}. \) Calliphoridae, \( Protocalliphora rognesi \) Thompson & Pont.

sordida Zetterstedt, 1838: 657 (Musca). Sweden, Lycksele. LT 

ZIL. Calliphoridae, Protocalliphora rognesi Thompson & Pont. Preocc. Gmelin 1790. Lectotype designated by Sabrosky 1956: 179. N. Syn.

sordidissima Walker, 1864: 216 (Musca). Mysol. HT & BMNH. Muscidae, Musca domestica Linnaeus. See Pont 1990: 169.

soror Robineau-Desvoidy, 1830: 399 (Musca). India, Coromandel. T 

DESTROY. Muscidae, Musca domestica Linnaeus.

spangleri Zielke, 1970: 504 (Musca). Nomen nudum. Uganda, Kichwamba, Ankole. HT & USNM. Muscidae, Musca spangleri Zielke. Published after 1930 without a description.

spangleri Zielke, 1971a: 103, fig. 1 (Musca). Uganda, Kichwamba, Ankole Distr. HT & USNM. Muscidae, Musca spangleri Zielke.

spatula Scopoli, 1763: 341 (Musca). Idrija. T A DESTROY. Stratiomyidae, Stratiomys chamaeleon Linnaeus.

spectanda Wiedemann, 1830: 419 (Musca). Sierra Leone. HT ♂ NMW. Muscidae, Musca sorbens Wiedemann. See Pont 1973: 290.

speculifera de Villers, 1789a: 464, pl. 9, fig. 25 (Musca). Europe. T A Author. Syrphidae, Chrysogaster sp.

speculifera Bezzi, 1911: 96 (Musca). Tunisia, Djerba Is. HT & MCSNM. Muscidae, Musca albina Wiedemann. Preoce. de Villers 1789.

sperata Walker, 1859b: 136 (Musca). Sulawesi, Makassar. T & BMNH. Muscidae, Neomyia sperata Walker.

sphegea Gmelin, 1790: 2873 (Musca). Subsequent Usage of Syrphus sphegeus Fabricius. Sciomyzidae, Sepedon sphegeus Fabricius.

sphinx Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio sphinx Fabricius. Bombyliidae, Ligyra sphinx Fabricius.

spilogaster Wiedemann, 1824: 50 (Musca). South Africa, Cape of Good Hope. T & UZMC. Sarcophagidae, Poecilometopa spilogaster Wiedemann.

spinifera Geoffroy, 1785: 494 (Musca). France, Paris. T A Author.

spinipes Scopoli, 1763: 342 (Musca). Carniola. T A DESTROY. Sciomyzidae, Sepedon spinipes Scopoli.

spinipes Fallén, 1823: 61 (Musca). Sweden. LT & NRS. Muscidae, Hydrotaea diabolus Harris. Preocc. Scopoli 1763. Lectotype designated by Pont 1984: 293.

spinohumera Awati, 1916b: 138 (Musca). India. ST Q CRIK. Muscidae, Musca lusoria Wiedemann.

spinosa Awati, 1916b: 138 (Musca). India. ST Q CRIK. Muscidae, Musca pattoni Austen.

spitzbergensis Walker, 1849: 893 (Musca). Subsequent Usage of Calliphora spitzbergensis Robineau-Desvoidy. Calliphoridae, Calliphora vicina Robineau-Desvoidy.

- splendens Gmelin, 1790: 2833 (Musca). Subsequent Usage of Stratiomys splendens Fabricius. Stratiomyidae, Pycnomalla splendens Fabricius.
- splendens Pont, 1980: 727 (Musca). N. n. Musca splendida Paterson. Muscidae, Musca splendens Pont.
- splendida Donovan, 1805: 88, pl. 41 (*Musca*). Australia, New South Wales. NT & BMNH. Tachinidae, *Rutilia splendida* Donovan. Crosskey 1973a: 123.
- splendida Meigen, 1826: 56 (Musca). Germany, Stolberg. LT & MNHNP. Calliphoridae, Lucilia caesar Linnaeus. Preocc. Donovan 1805. Lectotype designated by Rognes 1991a: 164.
- splendida Paterson, 1957: 111, fig. 5 (Musca). South Africa, Cape, Knysna. HT & SAIMR. Muscidae, Musca splendens Pont. Preocc. Donovan 1805.
- spoliata Scopoli, 1763: 350 (Musca). Carniola. T A DESTROY. Scenopinidae, Scenopinus fenestralis Linnaeus.
- spondylii Schrank, 1837: 18 (Musca). Austria? T A Unknown. Sepsidae, Saltella sphondylii Schrank. N. Syn.
- squalida Gmelin, 1790: 2861 (Musca). Europe. T A NMI.
- squamata Müller, 1764: 85 (Musca). Denmark, Sjaelland, Frederiksdal. T A Author. Dolichopodidae, Dolichopus ungulata Linnaeus. N. Syn.
- squamata Malloch, 1934: 10 (Viviparomusca). Sulawesi, Menado. HT & IRSNB. Muscidae, Musca mallochi Thompson & Pont. Preocc. Müller 1764.
- squamifera Müller, 1776: 176 (Musca). N. n. Musca squamata Müller. Dolichopodidae, Dolichopus ungulatus Linnaeus.
- stabulans Fallén, 1817: 252 (Musca). Sweden. LT & NRS. Muscidae, Muscina stabulans Fallén. Lectotype designated by Pont 1984: 293.
- stellata Fuesslin, 1775: 56 (*Musca*). Switzerland, Zürich. TA Unknown. Tephritidae, *Trupanea stellata* Fuesslin.
- stellata Geoffroy, 1785: 470 (Musca). France, Paris. T A Author. Preocc. Fuesslin 1775.
- stellata Roemer, 1789: 84 (Musca). Switzerland. T A Unknown. Tephritidae, Trupanea stellata Fuesslin. Preocc. Fuesslin 1775.
- stercoraria Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Scathophagidae, Scathophaga stercoraria Linnaeus. 2 sp. in LSL (Dear MS).
- stictica Gmelin, 1790: 2863 (Musca). N. n. Musca punctata Schrank. Tephritidae, Orellia stictica Gmelin. N. Comb.
- stigma Fabricius, 1798: 563 (Musca). West Indies. T A UZMC. Otitidae, Notogramma stigma Fabricius.
- stigma Panzer, 1798c: 21 (Musca). Austria. T A ZMHU. Sepsidae, Sepsis punctum Fabricius.
- stimulans Robineau-Desvoidy, 1830: 393 (Byomya). France, Saint-Sauveur. T A DESTROY. Muscidae, Musca tempestiva Fallén.
- stimulans Macquart, 1835: 268 (Musca). Subsequent Usage of Byomyia stimulans Robineau-Desvoidy. Muscidae, Musca tempestiva Fallén.
- stipata Walker, 1853b: 348 (Musca). Guyana, Demerara. T ♀ BMNH. Muscidae, Graphomya stipata Walker.
- stomoxidea Robineau-Desvoidy, 1830: 396 (Musca). Brazil. T♀ DESTROY. Muscidae, Musca domestica Linnaeus.
- striata Gmelin, 1790: 2865 (Musca). N. n. Tipula lineata Fabricius. Keroplatidae, Cerotelion striatus Gmelin. N. Status

striata Fabricius, 1794: 315 (Musca). Denmark, Copenhagen. LT Q UZMC. Sarcophagidae, Ravinia pernix Harris. Preocc. Gmelin 1790. Lectotype designated by Pape 1986: 303 (also Townsend 1931c: 377).

striata Townsend, 1931c: 378 (Musca). Subsequent Usage of Musca striata of Enderlein, not Fabricius. Sarcophagidae, Thyrsocnema incisilobata Pandellé. Renamed as Thyrsocnema transita based on HT M in ZMHU.

striatacta Awati, 1916b: 138 (Musca). India. HT A CRIK. Muscidae, Musca striatacta Awati.

strigata Gmelin, 1790: 2834 (Musca). Subsequent Usage of Stratiomys strigata Fabricius. Stratiomyidae, Stratiomys longicornis Scopoli.

strigosa Gmelin, 1790: 2843 (Musca). Europe. T A NMI.

strigosa Fabricius, 1794: 322 (Musca). Germany, Kiel. HT A UZMC F. Anthomyiidae, Hylemya vagans Panzer. Preocc. Gmelin 1790. See Michelsen 1979a: 189.

strigula Fabricius, 1794: 334 (Musca). France. T A MNHNP. Chloropidae, Chlorops strigula Fabricius.

striolata Fallén, 1824: 71 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Botanophila striolata Fallén. Lectotype designated by Michelsen 1983: 118.

structus Harris, 1780: 147, pl. 43, fig. 68 (Musca). England. T A Unknown. Anthomyiidae.

strumosa Scopoli, 1763: 343 (Musca). Carniola. T A DESTROY. Micropezidae, Micropeza corrigiolata Linnaeus.

stuans Manuel, 1811: 35 (Musca). Missp. aestuans Linnaeus.

stuckenbergi Zielke, 1971c: 100 (Musca). South Africa, Natal, Pietermaritzburg. HT P NMP. Muscidae, Musca sorbens Wiedemann.

stygia Fabricius, 1781: 438 (*Musca*). (Newfoundland) Error for New Zealand. HT 9 BMNH B. Calliphoridae, *Calliphora stygia* Fabricius. See Osten Sacken 1882: 20; Townsend 1931c: 374; Dear 1985a:24.

stylata Fabricius, 1775: 785 (Musca). England. T A UZMC F. Tephritidae, Urophora stylata Fabricius.

subcoleoptrata Gmelin, 1790: 2869 (Musca). Subsequent Usage of Conops subcoleoptrata Linnaeus. Tachinidae, Allophora subcoleoptrata Linnaeus.

subcutanea Linnaeus, 1764a: 297 (Musca). Nomen nudum. [France]. Tephritidae. Published in non-binominal work.

subcutanea Linnaeus, 1764a: 300 (Musca). Nomen nudum. [France]. Tephritidae, Ensina sonchi Linnaeus. Published in non-binominal work.

subcutanea Linnaeus, 1764a: 287 (Musca). Nomen nudum. [France]. Tephritidae. Published in non-binominal work.

subcutanea Bjerkander, 1793: 57 (Musca). Sweden. T A UNKNOWN.

subcutanea Turton, 1801: 623 (Musca). N. n. Musca heraclii Linnaeus. Tephritidae, Euleia heraclii Linnaeus. Preocc. Bjerkander 1793.

sublatus Harris, 1780: 125, pl. 36, fig. 56 (Musca). England. T & Unknown. Muscidae, Phaonia sp.

subpuncta Fallén, 1825: 80 (Musca). Sweden. LT & NRS. Muscidae, Helina quadrum Fabricius. Lectotype designated by Pont 1984: 294.

subsultans Linnaeus, 1767: 993 (Musca). Sweden. T A LSL. Phoridae, Borophaga subsultans Linnaeus. See Disney 1982: 115.

subtomentosa Gmelin, 1790: 2843 (Musca). Europe. T A NMI. Syrphidae, Sericomyia silentis Harris.

subulata Gmelin, 1790: 2860 (Musca). Europe. T A NMI.

subvariegata Jördens, 1801: 301 (Musca). Nomen nudum. Name published in synonymy of Musca carnaria and attributed to "Scopoli Ent. carn. 869" [= variegata].

subventus Harris, 1780: 145, pl. 43, fig. 60 (Musca). England. T & Unknown. Muscidae, Phaonia subventa Harris.

succincta Gmelin, 1790: 2866 (Musca). N. n. Rhagio cinctus Fabricius. Anisopodidae, Sylvicola cinctus Fabricius.

suecica de Villers, 1789a: 510 (Musca). Sweden, Ostrogothia. T A Unknown.

suffusa Walker, 1853b: 336 (Musca). Brazil. T A DESTROY. Calliphoridae.

sugillatrix Robineau-Desvoidy, 1830: 392 (Plaxemya). France, Saint-Sauveur. T & DESTROY. Muscidae, Musca osiris Wiedemann.

suilla Fabricius, 1794: 343 (Musca). Germany. T A UZMC F. Scathophagidae, Scathophaga suilla Fabricius.

surinamensis De Geer, 1776: 145, pl. 29, fig. 1 (*Musca*). Surinam. T A NRS. Syrphidae, *Palpada vinetorum* Fabricius. See Thompson 1973: 354.

sylvanus Gmelin, 1790: 2832 (*Musca*). Subsequent Usage of *Bibio sylvana* Fabricius. Bombyliidae, *Comptosia sylvana* Fabricius.

sylvarum Linnaeus, 1758a: 592 (Musca). Sweden. LT 9 LSL. Syrphidae, Xylota sylvarum Linnaeus. Lectotype designated by Thompson et al. 1982: 160.

syngenesiae Fabricius, 1781: 454 (Musca). Germany. T A UZMC F. Platystomatidae, Rivellia syngenesiae Fabricius.

syrphus Meuschen, 1787: 212 (Musca). Unknown. T A Auction.

tabaniformis Fabricius, 1805: 302 (*Musca*). Mogador [=Morocco, Essaouira]. HT Q UZMC. Sarcophagidae, *Craticulina tabaniformis* Fabricius. See Townsend 1931c: 379; Pape 1986: 303.

tachinoides Fallén, 1817: 244 (*Musca*). Sweden, Östergotland & Vestergotland. ST A NRS. Tachinidae, *Stomina tachinoides* Fallén. See Townsend 1932: 43 (invalid HT designation).

taeniata Panzer, 1798c: 18 (Musca). Germany, Nuremberg. T & ZMHU. Tachinidae, Phasia crassipennis Fabricius.

taenionota Wiedemann, 1819a: 22 (Musca). Java. T Q UZMC. Sarcophagidae.

tahitiensis Lichtenstein, 1796: 215 (Musca). Tahiti. T A Auction. Muscidae.

taitensis Macquart, 1843: 310, pl. 20, fig. 8 (Musca). Tahiti. T & MNHNP. Muscidae, Musca domestica Linnaeus.

taniaria Wiedemann, 1830: 406 (*Musca*). Incosp. *laniaria* Wiedemann. Calliphoridae, *Cochliomyia macellaria* Fabricius. Name revised by Wiedemann 1830: 683. See Dear 1985b: 141.

tarda Linnaeus, 1761: 441 (Musca). Sweden. T A LSL. Scenopinidae, Scenopinus fenestralis Linnaeus. 4 sp. in LSL (Dear MS).

tardigradus Harris, 1776: 46, pl. 11, fig. 6 (*Musca*). England. T A Unknown. Stratiomyidae, *Oxycera rara* Scopoli.

tarditas Harris, 1780: 106, pl. 32, fig. 40 (Musca). England. T A Unknown. Syrphidae, Cheilosia sp.

tartidus Harris, 1780: index (*Musca*). Incosp. *tarditas* Harris. Syrphidae, *Cheilosia* sp. Name revised by Goffe 1946: 85.

tau Schrank, 1781: 458 (Musca). Austria, Linz. T A Unknown. Muscidae, Musca autumnalis De Geer.

tegularia Wiedemann, 1830: 655 (Musca). Egypt. T A SMF. Calliphoridae, Lucilia sericata Meigen.

temperata Walker, 1853b: 340 (Musca). East Indies. T 9 BMNH. Calliphoridae,

Lucilia cuprina Wiedemann.

tempestatum Bezzi, 1908c: 101 (Biomyia). Ethiopia (Eritrea), Asmara. ST & MCSNM. Muscidae, Musca tempestatum Bezzi. STs also in BMNH (Pont 1990: 169) & USNM (teste Pont).

tempestiva Fallén, 1817: 254 (Musca). Sweden, Skåne, near Kivik. LT & NRS. Muscidae, Musca tempestiva Fallén. Lectotype designated by Pont 1984: 294.

temula Scopoli, 1763: 330 (Musca). Carniola. T A DESTROY. Tachinidae, Zophomyia temula Scopoli.

tenax Linnaeus, 1758a: 591 (Musca). Sweden. LT Q LSL. Syrphidae, Eristalis tenax Linnaeus. Lectotype designated by Thompson et al. 1982: 160.

tenebricus Harris, 1776: 45, pl. 11, fig. 3 (Musca). England. T A Unknown. Stratiomyidae, Stratiomys longicornis Scopoli.

tener Harris, 1780: 116, pl. 34, fig. 19 (Musca). England. T A Unknown. Sciomyzidae.

tentaculata De Geer, 1776: 86 (Musca). Sweden. ST A Lost. Muscidae, Lispe tentaculata De Geer. See Persson, Pont & Michelsen 1984: 93.

tenur Harris, 1780: 112, pl. 33, fig. 59 (Musca). England. T A Unknown. Syrphidae, Neoascia tenur Harris. See Thompson 1981b: 476.

tenur Harris, 1780: index (*Musca*). Încosp. *tener* Harris. Sciomyzidae. Name status by present revision.

teres Gmelin, 1790: 2861 (Musca). Europe. T A UNKNOWN.

terminata Wiedemann, 1830: 414 (Musca). Sierra Leone. T & NMW. Calliphoridae, Isomyia terminata Wiedemann.

terraereginae Johnston & Bancroft, 1920b: 20 (Musca). Nomen nudum. Australia, Queensland. Muscidae, Musca terraereginae Johnston & Bancroft. [also 1920c: 34, 1920d: 73].

terraereginae Johnston & Bancroft, 1920e: 31 (Musca). Australia, Queensland, Eidsvold. LT & QMB. Muscidae, Musca terraereginae Johnston & Bancroft. Lectotype designated by Pont 1973: 180.

terrestris Linnaeus, 1767: 996 (Musca). Sweden. T A LSL.

tessella Turton, 1801: 604 (*Musca*). Emend. Musca tessellata Fabricius. Tachinidae, Tachina tessella Turton. N. Status

tessellata Geoffroy, 1785: 476 (Musca). France, Paris. T A Author.

tessellata Fabricius, 1794: 324 (Musca). Germany. T A UZMC F. Tachinidae, Tachina tessella Turton. Preocc. Geoffroy 1785. N. Syn.

tessellata Fabricius, 1805: 285 (Musca). South America. HT Q UZMC. Sarcophagidae, Euboettcheria australis Townsend. Preocc. Geoffroy 1785. See Townsend 1931a: 74; Pape 1986: 303.

testacea De Geer, 1776: 87 (Musca). Sweden. LT & NRS. Anthomyiidae, Pegomya testacea De Geer. Lectotype designated by Persson, Pont & Michelsen 1984: 94.

testacea Fabricius, 1781: 440 (Musca). Germany. T A DESTROY. Muscidae, Phaonia rufiventris Scopoli. Preocc. De Geer 1776. See Michelsen 1979a: 190.

testacea Fabricius, 1787: 330 (Stratiomys). South America. T A UZMC F. Xylophagidae, Coenomyia ferruginea Scopoli.

testaceus Fabricius, 1805: 257 (Sargus). N. n. Musca elongata Fabricius. Stratiomyidae, Ptecticus testaceus Fabricius.

teste Zielke, 1971c: 126 (Musca). Nomen nudum. Muscidae, Musca lusoria Wiedemann. Published in synonymy, not subsequently validated by usage. Mistake for Musca lusoria Wiedemann teste Bezzi!

tetragona Geoffroy, 1785: 484 (Musca). France, Paris. T A Author. Syrphidae.

thalassina Meigen, 1826: 54 (Musca). Germany, Stolberg. HT 9 MNHNP. Calliphoridae, Phormia regina Meigen. See Rognes 1991a: 106.

thuscia Walker, 1849: 897 (Musca). Azores, Fayal. T & BMNH. Calliphoridae, Calliphora vicina Robineau-Desvoidy.

thymastri Gmelin, 1790: 2876 (Musca). Subsequent Usage of Syrphus thymastri Fabricius. Syrphidae, Paragus sp.

tiberina Saccà, 1947: 128 (Musca, as domestica var.). Nomen nudum. T A UN-KNOWN. Muscidae, Musca domestica Linnaeus.

tibetana Fan, 1978: 329, fig. 1 (Musca). Tibet, Nyingchi (teste Fan). T & SIE. Muscidae, Musca tibetana Fan.

tibialis Gmelin, 1790: 2859 (Musca). Europe. T A NMI.

tibialis Walker, 1836: 355 (Musca). Brazil, Santa Catarina. T A BMNH. Muscidae, Muscina stabulans Fallén. Preocc. Gmelin 1790.

tibiseta Malloch, 1928: 334 (Byomya). Sumatra, Fort de Kock. HT ♂ Lost. Muscidae, Musca seniorwhitei Patton. See Pont 1970a: 105.

tifata Walker, 1849: 871 (Musca). China. T & BMNH. Calliphoridae, Lucilia papuensis Macquart.

tigrina Fabricius, 1775: 779 (Musca). England. T A DESTROY. Muscidae, Coenosia tigrina Fabricius. See Michelsen 1979a: 190.

timeo Harris, 1780: 107, pl. 32, fig. 44 (*Musca*). England. T A Unknown. Syrphidae, *Platycheirus peltatus* Meigen. Name improperly formed (verb).

timidus Harris, 1780: 116, pl. 34, fig. 17 (Musca). England. T A Unknown. Acalyptrate.

tipulaea Geoffroy, 1785: 497 (Musca). France, Paris. T A Author.

tipularia Fabricius, 1794: 337 (Musca). Barbaria. T A MNHNP. Scathophagidae.

tipuliformis Gmelin, 1790: 2865 (Musca). Subsequent Usage of Rhagio tipuliformis Fabricius.

tomentosa Turton, 1801: 634 (Musca). Subsequent Usage of Rhagio tomentosus Fabricius. Rhagionidae, Chrysopilus auratus Fabricius.

topiaria Schrank, 1803: 126 (Musca). Germany, Bavaria, Ingolstadt. T A UN-KNOWN.

torosa Wiedemann, 1819a: 21 (Musca). Bengal. T♀ UZMC. Calliphoridae, Bengalia torosa Wiedemann.

torvis Harris, 1780: index (Musca). Incosp. torvus Harris. Tachinidae, Ernestia rudis? Fallén. Name status by present revision.

torvus Harris, 1780: 113, pl. 33, fig. 26 (Musca). England. T A Unknown. Tachinidae, Ernestia rudis? Fallén.

totliana Gmelin, 1790: 2850 (Musca). N. n. Musca fasciata Fabricius. Micropezidae, Hoplocheiloma totliana Gmelin. N. Comb.

tranquebarica Gmelin, 1790: 2870 (Musca). N. n. Syrphus quadrilineatus Fabricius. Syrphidae, Eristalinus arvorum Fabricius.

transfuga Linnaeus, 1758a: 594 (Musca). Sweden. LT Q LSL. Syrphidae, Lejops transfugus Linnaeus. Lectotype designated by Thompson et al. 1982: 160.

transvaalensis Zielke, 1971c: 120 (Musca). South Africa, Transvaal, Bloemhof. HT P NMP. Muscidae, Musca transvaalensis Zielke.

transversa Fallén, 1825: 92 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Pegomya transversa Fallén. Lectotype designated by Michelsen 1983: 118.

trelineata Harris, 1782: 58 (Musca). Missp. trilenva Harris. Syrphidae, Helophilus pendulus Linnaeus.

tremula Linnaeus, 1767: 991 (Musca). Emend. temula Scopoli. Tachinidae, Zophomyia temula Scopoli.

triangula Fallén, 1825: 74 (Musca). Sweden, Skåne, Äsperöd. LT & NRS. Muscidae, Limnophora triangula Fallén. Lectotype designated by Pont 1984: 294.

tricincta Fabricius, 1805: 301 (Musca). South America. HT Q UZMC. Tachinidae, Comatacta tricincta Fabricius. See Townsend 1931a: 91.

tricolor Gmelin, 1790: 2861 (Musca). Europe. T A NMI.

tridens Bosc, 1792: 54 (Musca). France, Paris. T A MNHNP.

trifascia Walker, 1861b: 245 (*Musca*). New Guinea, Dorey. T 

BMNH. Calliphoridae, *Dexopollenia trifascia* Walker.

trifasciata Schrank, 1781: 453 (Musca). Subsequent Usage of Conops trifasciata Scopoli. Syrphidae, Volucella inanis Linnaeus.

trigrammica Schrank, 1803: 125 (Musca). Germany, Bavaria, Ingolstadt. T A Unknown.

trileniata Harris, 1780: index (Musca). Missp. trilenva Harris. Syrphidae, Helophilus pendulus Linnaeus.

trilenva Harris, 1776b: 58, pl. 15, fig. 9 (Musca). England. T A Unknown. Syrphidae, Helophilus pendulus Linnaeus.

trilineata Linnaeus, 1767: 980 (Musca). Sweden. T A LSL. Stratiomyidae, Oxycera trilineata Linnaeus. 1 sp. in LSL (Dear MS).

trilineata Harris, 1776b: 58 (Musca). Incosp. trilenva Harris. Syrphidae, Helophilus pendulus Linnaeus. Name status by present revision.

trilineatus Fabricius, 1775: 766 (Syrphus). New Zealand. T A BMNH B. Syrphidae, Helophilus seelandicus Gmelin.

trimaculata Geoffroy, 1785: 472 (Musca). France, Paris. T A Author.

trinervis Geoffroy, 1785: 489 (Musca). France, Paris. T A Author.

tringaria Linnaeus, 1758a: 590 (Musca). Sweden. T A LSL. Rhagionidae, Rhagio tringarius Linnaeus. 1 sp. in LSL (Dear MS).

tripunctata Scopoli, 1763: 329 (Musca). Idrija. T A DESTROY.

tripunctata Bjerkander, 1777: 33 (Musca). Sweden. T A UNKNOWN. Preocc. Scopoli 1763.

tripunctata Gmelin, 1790: 2861 (Musca). Europe. T A NMI. Preocc. Scopoli 1763. triquetra Fallén, 1825: 73 (Musca). Subsequent Usage of Anthomyia triquetra Wiedemann. Muscidae, Azelia triquetra Wiedemann.

tristis Sulzer, 1776: 216 (Musca). Switzerland, Zürich. T A Unknown.

tristis Harris, 1780: 115, pl. 34, fig. 13 (Musca). England. T A Unknown. Sciomyzidae, Coremacera marginata Fabricius. Preocc. Sulzer 1776.

tristis Herbst, 1787: 110 (Musca). T A UNKNOWN. Tachinidae, Allophora hemiptera Fabricius. Preocc. Sulzer 1776.

tristis Schrank, 1803: 110 (Musca). Germany, Gern. T A Unknown. Syrphidae. Preocc. Sulzer 1776.

tristor Harris, 1780: 107, pl. 32, fig. 42 (*Musca*). England. T A Unknown. Syrphidae, *Pipiza noctiluca* Linnaeus. Name improperly formed (verb).

trita Walker, 1856a: 24 (Musca). Malacca. T & BMNH. Muscidae, Neomyia coeruleifrons Macquart.

troglodyta Gmelin, 1790: 2832 (Musca). Subsequent Usage of Bibio troglodyta Fabricius. Bombyliidae, Villa troglodyta Fabricius.

truncata Bjerkander, 1777: 34 (Musca). Sweden. T A UNKNOWN.

tuberculata Müller, 1776: 177 (Musca). Denmark. T A Author.

tuberculata de Villers, 1789a: 428, pl. 9, fig. 12 (Musca). Southern France, St. Jean de Gardonenque. T A Author. Bibionidae, Dilophus novemmaculatus de Villers. Preocc. Müller 1776.

tuberculata de Villers, 1789a: 550 (Musca). France, Cevennes Mts. T A Author. Preocc. Müller 1776.

tuberis Vallot, 1802: 131 (Musca). France. T A UNKNOWN. Heleomyzidae, Suillia sp. N. Comb.

tuguriorum Scopoli, 1763: 328 (Musca). Carniola. T A DESTROY. Muscidae, Phaonia tuguriorum Scopoli.

turbida Wiedemann, 1830: 396 (*Musca*). South Africa, Cape of Good Hope. T <sup>Q</sup> ZMHU. Calliphoridae.

turbida Walker, 1853b: 336 (Musca). Jamaica. T A DESTROY. Calliphoridae, Cochliomyia macellaria Fabricius. Preocc. Wiedemann 1830. [teste Pont].

turcica Geoffroy, 1785: 487 (Musca). France, Paris. T A Author.

tussilaginis Fabricius, 1775: 787 (Musca). Denmark. T A UZMC F. Tephritidae, Terellia tussilaginis Fabricius.

ugandae Emden, 1939: 84 (*Musca*, as *autumnalis* ssp.). Uganda, Burunga. LT & BMNH. Muscidae, *Musca ugandae* Emden. Lectotype designated by Pont 1990: 169.

uliginosa Linnaeus, 1767: 983 (Musca). Europe. T ALSL. Stratiomyidae, Nemotelus uliginosus Linnaeus. 1 sp. in LSL (Dear MS).

uliginosa Fallén, 1825: 81 (Musca). Sweden. LT & NRS. Muscidae, Helina sexmaculata Preyssler. Preocc. Linnaeus 1758. Lectotype designated by Pont 1984: 295.

umbellatarum Fabricius, 1775: 785 (Musca). England. T A UZMC F. Pallopteridae, Palloptera umbellatarum Fabricius.

umbelliferarum Scopoli, 1763: 349 (Musca). Carniola. T A DESTROY. Chloropidae, Chlorops pumilionis Bjerkander.

umbraculata Fabricius, 1794: 348 (*Musca*). France. T A MNHNP. Chloropidae, *Platycephala umbraculata* Fabricius.

umbraculata Fabricius, 1805: 294 (Musca). Denmark, Copenhagen. HT & UZMC. Muscidae, Musca domestica Linnaeus. Preocc. Fabricius 1794. See Michelsen 1979a: 190.

umbrarum Linnaeus, 1758a: 599 (Musca). Europe. T A LSL. Sciomyzidae, Dictya umbrarum Linnaeus. 3 sp. in LSL (Dear MS).

umbrifera Walker, 1861c: 267 (Musca). Sulawesi, Tondano. HT & BMNH. Calliphoridae, Pollenia umbrifera Walker. [teste Pont]. N. Comb.

unguicornis Scopoli, 1763: 335 (Musca). Carniola. T A DESTROY. Sciomyzidae, Limnia unguicornis Scopoli.

ungulata Linnaeus, 1758a: 598 (Musca). Europe. T A LSL. Dolichopodidae, Dolichopus ungulatus Linnaeus. 4 sp. in LSL (Dear MS).

unicolor Fabricius, 1805: 307 (Musca). Germany, Kiel. T A UZMC F. Pallopteridae,

Palloptera saltuum Linnaeus.

unisetula Fan, 1965: 122 (Musca, as tempestiva var.). Nomen nudum. Korea, Kaicheng. HT & SIE. Muscidae, Musca tempestiva Fallén. Varietal name proposed after 1960.

univalvis Turton, 1801: 632 (Musca). N. n. Musca clavicornis Fabricius. Syrphidae, Ceriana clavicornis Fabricius.

unxia Walker, 1849: 899 (Musca). Italy. LT & BMNH. Calliphoridae, Bellardia pandia Walker. Lectotype designated by Schumann 1974: 253.

urbanus Harris, 1780: 153, pl. 45, fig. 85 (Musca). England. T A Unknown. Tachinidae, Siphona geniculata De Geer.

urticae Linnaeus, 1758a: 600 (Musca). Europe. T A LSL. Otitidae, Ceroxys urticae Linnaeus. 2 sp. in LSL (Dear MS).

urticae, Fabricius, 1794: 357 (Musca). Misid. urticae Linnaeus. Otitidae, Seioptera vibrans Linnaeus.

vaccarum De Geer, 1776: 85, pl. 5, fig. 1 (Musca). N. n. Musca meteorica Linnaeus. Muscidae, Hydrotaea meteorica Linnaeus.

vaccina Robineau-Desvoidy, 1863: 625 (Musca). France, Paris. T A DESTROY.
Muscidae, Musca domestica Linnaeus.

vacua Scopoli, 1763: 346 (Musca). Carniola. T A DESTROY. Syrphidae, Syrphus ribesii Linnaeus.

vacua Fallén, 1817: 240 (Musca). Sweden. T A NRS. Tachinidae, Dexia cincta Robineau-Desvoidy. Preoce. Scopoli 1763. N. Comb.

vagabunda Meigen, 1826: 72 (Musca). Germany, Stolberg. LT Q MNHNP. Calliphoridae, Pollenia vagabunda Meigen. Lectotype designated by Rognes 1991aa: 238 & 1992: 109.

vagans Panzer, 1798b: 18 (Musca). Austria. T 2 ZMHU. Anthomyiidae, Hylemya vagans Panzer.

vagans Fallén, 1825: 78 (Musca). Sweden. LT & NRS. Muscidae, Phaonia falleni Michelsen. Preocc. Panzer 1798. Lectotype designated by Pont 1984: 295.

vagatoria Robineau-Desvoidy, 1830: 399 (Musca). France. T & DESTROY. Muscidae, Musca domestica Linnaeus.

vagus Harris, 1780: 153, pl. 45, fig. 82 (Musca). England. T A Unknown. Psilidae, Loxocera sp.

valens Harris, 1780: 113, pl. 33, fig. 25 (*Musca*). England. T A Unknown. Sarcophagidae, *Sarcophaga* sp.

valentina Müller, 1766: 198 (Musca). Italy, Piedmont, Torino. T A DESTROY. Syrphidae, Volucella zonaria Poda.

valga Gmelin, 1790: 2879 (Musca). Europe. T A NMI. Syrphidae, Chalcosyrphus valgus Gmelin.

valida Wiedemann, 1830: 387 (Musca). Unknown (= South Carolina?). HT♀ NMW. Tachinidae, Theresia rutilans Fabricius. Preocc. Harris 1780. See Townsend 1931a: 102.

validus Harris, 1780: 124, pl. 36, fig. 50 (Musca). England. T Q Unknown. Muscidae, Phaonia valida Harris.

- vallata Forster, 1770: 15 (Musca). Nomen nudum. England. T A LSL. Stratiomyidae, Beris vallata Forster.
- vallata Forster, 1771: 96 (Musca). England. T A LSL. Stratiomyidae, Beris vallata Forster.
- vanella Turton, 1801: 632 (Musca). Subsequent Usage of Rhagio vanellus Fabricius. Rhagionidae, Rhagio tringaria Linnaeus.
- varensis Robineau-Desvoidy, 1863: 627 (Musca). France, Var. T Q DESTROY. Calliphoridae, Pollenia sp.
- varia Gmelin, 1790: 2843 (Musca). Europe. T A NMI.
- varia Fabricius, 1794: 327 (Musca). India Orientali. HT A UZMC. Tachinidae, Cuphocera iavana Wiedemann. Preocc. Gmelin 1790. See Townsend 1932: 42; Crosskey 1973b: 134. N. Comb.
- varia Meigen, 1826: 66 (Musca). Germany, Stolberg. LT & MNHNP. Calliphoridae, Pollenia rudis Fabricius. Preocc. Gmelin 1790. Lectotype designated by Rognes 1991a: 238. N. Comb.
- varia Walker, 1853b: 342 (Musca). South Australia. HT ♀ BMNH. Calliphoridae, Amenia chrysame Walker. Preocc. Gmelin 1790. See Crosskey 1965: 120.
- variabilis Gmelin, 1790: 2834 (Musca). N. n. Stratiomys mutabilis Fabricius. Stratiomyidae, Hoplitimyia mutabilis Fabricius.
- variabilis Fallén, 1823: 58 (Musca). Sweden. LT & NRS. Muscidae, Thricops nigrifrons Robineau-Desvoidy. Preocc. Gmelin 1790. Lectotype designated by Pont 1984: 295.
- varians Wiedemann, 1830: 655 (Musca). Egypt. T 

  SMF. Calliphoridae, Lucilia cuprina Wiedemann.
- varians Meigen, 1975: 418 (Musca). Nomen nudum. [Germany?]. T A MNHNP. Calliphoridae, Pollenia vagabunda Meigen. See Rognes 1992: 109.
- variata Fallén, 1823: 59 (Musca). Sweden, Skåne. LT & NRS. Anthomyiidae, Hylemya variata Fallén. Lectotype designated by Huckett 1968: 346.
- varicolor Fabricius, 1805: 296 (Musca). India, Tranquebar. HT & UZMC. Calliphoridae, Bengalia varicolor Fabricius. See Townsend 1931c: 371.
- varicus Harris, 1780: 114, pl. 34, fig. 12 (Musca). England. T A Unknown. Sciomyzidae.
- varicus Harris, 1780: 115, pl. 34, fig. 14 (Musca). England, Kent. T A Unknown. Sciomyzidae, Limnia unguicornis Scopoli. Preoce. Harris 1780.
- variegata Scopoli, 1763: 326 (Musca). Idrija. T A DESTROY. Sarcophagidae, Sarcophaga variegata Scopoli.
- variegata De Geer, 1776: 96, pl. 6, fig. 1 (Musca). [Sweden]. T A NRS. Sciomyzidae, Euthycera chaerophylli Fabricius. Preocc. Scopoli 1763.
- varieus Harris, 1780: index (Musca). Incosp. varieus Harris. Sciomyzidae, Limnia unguicornis Scopoli. Name status by present revision.
- variolosa Schrank, 1837: 18 (Musca). Germany, Bavaria. Platystomatidae, Platystoma seminationis Fabricius.
- vecors Harris, 1780: 154, pl. 45, fig. 89 (Musca). England. T A Unknown. Tephritidae.
- velox Bjerkander, 1777: 33 (Musca). Sweden. T A UNKNOWN.
- venatoria Fabricius, 1805: 285 (Musca). South America. HT & UZMC. Tachinidae, Scotiptera venatoria Fabricius. See Townsend 1931a: 100.
- venosa Presl, 1822: 203 (Musca). Ligurian Prussian Amber. T A Unknown.

ventito Harris, 1780: 139, pl. 41, fig. 30 (*Musca*). England. T A Unknown. Calliphoridae. Name improperly formed (verb).

ventrosa Wiedemann, 1830: 656 (Musca). China. LT & NMW. Muscidae, Musca ventrosa Wiedemann. Lectotype designated by Pont 1973: 164.

verena Walker, 1849: 874 (Musca). Venezuela. T \( \begin{align\*} \text{BMNH. Calliphoridae,} \) Compsomyiops verena Walker. N. Comb.

vermileo Linnaeus, 1758a: 590 (Musca). France. T A LSL. Vermileonidae, Vermileo vermileo Linnaeus.

verna Fabricius, 1794: 330 (*Musca*). France. T A Lost. Muscidae, *Lispocephala* verna Fabricius. See Michelsen 1979a: 190; type figured by Coquebert 1804: 106.

vernicina Scopoli, 1763: 333 (*Musca*). Upper Carniola. T A DESTROY. Lonchaeidae, *Lonchaea* sp.

versicolor Gmelin, 1790: 2859 (Musca). Europe. T A NMI.

versicolor Fabricius, 1794: 283 (Syrphus). Germany. T A UZMC F. Syrphidae, Parhelophilus versicolor Fabricius.

versicolor Panzer, 1804: 140 (Musca). Germany, Regensburg. TA Unknown. Preocc. Gmelin 1790.

versicolor Meigen, 1826: 77 (Musca). Austria. ST A Lost. Muscidae, Dasyphora penicillata Egger. Preocc. Gmelin 1790. See Pont 1986b: 250.

versicolorata Turton, 1801: 639 (Musca). N. n. Syrphus versicolor Fabricius. Syrphidae, Parhelophilus versicolor Fabricius.

versipellis Gmelin, 1790: 2859 (Musca). Europe. T A NMI.

vesiculosa Turton, 1801: 646 (Musca). Subsequent Usage of Syrphus vesiculosus Fabricius. Syrphidae, Copestylum vesiculosum Fabricius.

vespaesimilis Barbut, 1781: 300, pl. 16, fig. 2 (Musca). N. n. Musca vespiformis Linnaeus. Syrphidae, Temnostoma vespiformis Linnaeus. Xanthogramma festiva L. was the species actually figured!

vespertina Fallén, 1823: 58 (Musca). Sweden. LT & NRS. Muscidae, Hebecnema vespertina Fallén. Lectotype designated by Pont 1984: 295.

vespiformis Linnaeus, 1758a: 593 (Musca). Sweden. LT & LSL. Syrphidae, Temnostoma vespiformis Linnaeus. Lectotype designated by Thompson et al. 1982: 161.

vespiformis Geoffroy, 1785: 478 (Musca). France, Paris. T A Author. Syrphidae, Xanthogramma festiva Linnaeus. Preocc. Linnaeus 1758.

vespillo Fabricius, 1794: 318 (*Musca*). Germany, Kiel. LT & UZMC. Calliphoridae, *Bellardia vespillo* Fabricius. "HT not in Kiel, nor label" Townsend 1931a: 70. Lectotype designated by Rognes 1991a: 59.

vetustissima Walker, 1849: 902 (Musca). Australia. HT Q BMNH. Muscidae, Musca vetustissima Walker. See Pont 1973: 148 & 1990: 169.

vibrans Linnaeus, 1758a: 599 (Musca). Europe. TALSL. Otitidae, Seioptera vibrans Linnaeus. 5 sp. in LSL (Dear MS).

vibrans Harris, 1780: 122, pl. 35, fig. 43 (Musca). England. T A Unknown. Sepsidae, Sepsis cynipsea Linnaeus. Preocc. Linnaeus 1758.

vicanus Harris, 1780: 152, pl. 45, fig. 78 (Musca). England. TA Unknown. Muscidae, Drymeia vicana Harris.

vicaria Walker, 1853b: 348 (Musca). New Zealand. HT & BMNH. Muscidae, Musca domestica Linnaeus. See Pont 1973: 169 & 1990: 170.

- vicina Walker, 1849: 893 (Musca). Subsequent Usage of Calliphora vicina Robineau-Desvoidy. Calliphoridae, Calliphora vicina Robineau-Desvoidy.
- vicina Macquart, 1851: 226 (Musca). America [=Martinique]. T & MNHNP. Muscidae, Musca domestica Linnaeus.
- viduata Linnaeus, 1758a: 598 (Musca). Sweden. LT & LSL. Syrphidae, Pipizella viduata Linnaeus. Lectotype designated by Thompson et al. 1982: 161.
- vilis Gravenhorst, 1807: 380 (Musca). Unknown, probably Germany. T A Lost. Muscidae.
- villeneuvii Patton, 1922b: 74 (*Musca*). India, Kerala, Nilambur. ST A BMNH. Muscidae, *Musca villeneuvii* Patton. See Pont 1990: 170.
- villica Gravenhorst, 1807: 378 (Musca). Unknown, probably Germany. T A Lost. Tachinidae.
- villosa Turton, 1801: 655 (Musca). Subsequent Usage of Stratiomys villosa Fabricius. Stratiomyidae, Lasiopa villosa Fabricius.
- vinculata Scudder, 1877: 758 (Musca). Colorado, White River [Oligocene]. T TUSNM.
- vinulus Harris, 1780: 117, pl. 34, fig. 21 (Musca). England. T A Unknown. Tephritidae.
- violacea Scopoli, 1763: 340 (Musca). Carniola. T A DESTROY. Stratiomyidae, Sargus cuprarius Linnaeus.
- violacea Panzer, 1804: 209 (Musca). Germany, Regensburg. T A Unknown. Preocc. Scopoli 1763.
- violacea Fabricius, 1805: 288 (Musca). South America. HT Q UZMC. Calliphoridae, Choloroprocta idioidea Robineau-Desvoidy. Preocc. Scopoli 1763. See Michelsen 1979a: 191 & Dear 1985b: 114.
- violacea Robineau-Desvoidy, 1830: 393 (Byomya). France, Saint-Sauveur. T Q DESTROY. Muscidae, Musca tempestiva Fallén.
- violacea Meigen, 1838: 301 (Musca). Germany, Stolberg. HT ♂ MNHNP. Calliphoridae, Protocalliphora azurea Fallén. Preocc. Scopoli 1763. See Rognes 1991a: 116.
- violacea Walker, 1853b: 335 (Musca). New Zealand. T ♀ BMNH. Calliphoridae, Calliphora quadrimaculata Swederus. Preocc. Scopoli 1763.
- viredaurea Wiedemann, 1819a: 22 (Musca). Java. T & UZMC. Calliphoridae, Isomyia viredaurea Wiedemann.
- virens Scopoli, 1763: 342 (*Musca*). Carniola. T A DESTROY. Dolichopodidae, *Liancalus virens* Scopoli.
- virens Thunberg, 1789: 91 (Musca). T A UNKNOWN. Preocc. Scopoli 1763.
- virens Wiedemann, 1830: 409 (Musca). Java. T 
  RNH. Calliphoridae, Cosmina limbipennis Macquart. Preocc. Scopoli 1763. N. Syn.
- virescens Stephens, 1829: 307 (Musca). England. T A UNKNOWN. Muscidae, Helina impuncta Fallén. Published in synonymy, not subsequently validated by usage. Published in synonymy with Anthomyia impuncta Fallén.
- virescens Meigen, 1838: 305 (Musca). Subsequent Usage of Pollenia virescens Macquart. Calliphoridae, Pollenia vespillo Fabricius.
- virginiensis Drury, 1773: 993 (Musca). Virginia. T A Author. Syrphidat, Milesia virginiensis Drury.
- viridana Panzer, 1804: 154 (Musca). Germany, Regensburg. T A Unknown.

viridaurea Wiedemann, 1830: 397 (Musca). Missp. viredaurea Wiedemann. Calliphoridae, Isomyia viredaurea Wiedemann.

viridescens de Villers, 1789a: 548 (Musca). France, Massiliae [=Marseille]. T A Author. Tephritidae. Preocc. de Villers 1789: 463.

viridescens de Villers, 1789a: 463, pl. 9, fig. 24 (Musca). Southern France, Marseille. T A Author. Syrphidae, Microdon sp.

viridescens Walker, 1849: 895 (Musca). Subsequent Usage of Calliphora viridescens Robineau-Desvoidy. Calliphoridae, Calliphora viridescens Robineau-Desvoidy.

viridi-caerulea De Geer, 1776: 62 (Musca). N. n. Musca cadaverina Linnaeus. Calliphoridae, Lucilia caesar Linnaeus.

viridula Gmelin, 1790: 2835 (Musca). Subsequent Usage of Stratiomys viridula Fabricius. Stratiomyidae, Oplodontha viridula Fabricius.

vitrata Geoffroy, 1785: 475 (Musca). France, Paris. T A Author.

vitreus Harris, 1776: 48, pl. 11, fig. 10 (Musca). England. T A Unknown. Stratiomyidae, Microchrysa polita Linnaeus.

vitripennis Meigen, 1826: 73, pl. 43, fig. 34 (Musca). France, Fontainebleau. HT & MNHNP. Muscidae, Musca vitripennis Meigen. See Pont 1986b: 250.

vittata Fabricius, 1794: 355 (Musca). Guinea. T A UZMC F. Tephritidae, Carpophthoromyia vittata Fabricius.

vivax Fabricius, Otto, 1780: 206 (Musca). Greenland, Millutarsuk. T A UZMC. Syrphidae, Platycheirus cyaneus Müller.

vivipara Geoffroy, 1785: 471 (Musca). France, Paris. T A Author.

vivipara Bezzi, 1911: 86 (Musca). Missp. larvipara Portschinsky. Muscidae, Musca larvipara Portschinsky.

vivipara major De Geer, 1776: 63, pl. 3, fig. 18 (Musca). Nomen nudum. N. n. Musca carnaria Linnaeus. Sarcophagidae, Sarcophaga carnaria Linnaeus. Not available; polynominal, not binominal.

vivipara minor De Geer, 1776: 70 (Musca). Nomen nudum. [Sweden]. T A NRS. Calliphoridae. Not available; polynominal, not binominal.

volets Harris, 1780: 84, pl. 25, fig. 12 (Musca). England. T A Unknown. Tachinidae, Dexiosoma caninum Fabricius.

volito Harris, 1780: 122, pl. 36, fig. 46 (*Musca*). England. T A Unknown. Anthomyidae, *Hylemya vagans* Panzer. Name improperly formed (verb).

volvulus Fabricius, 1794: 328 (Musca). Italy. T A UZMC F. Tachinidae, Phyllomya volvulus Fabricius.

vomitoria Linnaeus, 1758a: 595 (Musca). Europe & America. T A LSL. Calliphoridae, Calliphora vomitoria Linnaeus. 2 sp. in LSL (Dear MS).

vorax Geoffroy, 1785: 486 (Musca). France, Paris. T A Author. Syrphidae.

vulpina Fabricius, 1775: 776 (Musca). Europe. LT & UZMC F. Muscidae, Graphomya maculata Scopoli. Lectotype designated by Michelsen 1979a: 191.

vulpina de Villers, 1789: 554 (Musca). Subsequent Usage of Musca vulpina Fabricius. Muscidae, Graphomya maculata Scopoli.

wittweri Zielke, 1974: 12 (Musca). Kenya, 26 Miles SW Nairobi. HT & CAS. Muscidae, Musca wittweri Zielke.

xanthomela Walker, 1859b: 139 (Musca). Sulawesi, Makassar. HT & BMNH. Muscidae, Musca ventrosa Wiedemann. See Pont 1990: 170.

xanthomelas Wiedemann, 1824: 49 (Musca). Java. T Q UZMC. Muscidae, Musca xanthomelaena Wiedemann.

yerburyi Patton, 1923b: 329 (Musca). N. n. Musca incerta Patton. Muscidae, Musca pattoni Austen.

zonalis Turton, 1801: 644 (*Musca*). Subsequent Usage of *Syrphus zonalis* Fabricius. Syrphidae, *Phytomia zonata* Fabricius.

zonaria Schrank, 1781: 454 (Musca). Subsequent Usage of Conops zonaria Poda. Syrphidae, Volucella zonaria Poda.

zonatus Fabricius, 1787: 337 (Syrphus). China. T A UZMC. Syrphidae, Phytomia zonata Fabricius.

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horticola, hortorum, hortulana, hottentotta, hyalinata, hydroleon, hydrophila, hyoscyami, hypoleon, iacobeae, ichneumonea, ichneumonoides, ignavus, iliaca, illustratus, illustris, imbellis, impavida, importuna, impuncta, inaequalis, inanis, incurvata, inda, indicus, inflata, ingredior, ingruo, ingrus, intermedia, interpuncta, interpunctionis, interpunctus, interrupta, interruptus, intersecta, interventum, interventus, intricaria, intricata, investigator, invisito, ionia, iridata, irritans, jacobeae, japonica, jejuna, joco, labiata, lacustris, laeta, lagyra, lamed, lancifer, lanio, lappae, lappona, lardaria, larvarum, larvata, larvincola, lateralis, lateritia, laternaria, laticornis, latifrons, latipes, latrinarum, latro, leneatus, lenio, lenis, leontodontis, lepida, lepidus, leporinus, leptogaster, leucocephala, leuconyx, leucophaeus, leucopis, leucoptera, leucozona, levidus, libatrix, limatus, limbata, lincensis, lineata, lineatus, lineola, lineolae, lineolata, lingens, linzensis. lithophila, litorea, liturariae, liturata, litus, livens, longerro, longicornis, longipennis, longipes, longisco, longula, lucida, lucidula, lucophaeus, lucopheus, lucorum, lucozona, luctuosa, ludeus, ludicrous, ludicrus, ludifacies, ludifica, lugubris, lunata, lunula, lupulina, lurida, lustrator, lutaria, lutea, luteipennis, luteola, luteus, lychnidis, lyra, macellaria, macrocephala, macroceras, macrophthalma, maculata, maculatus, major larvarum, malansi, manicata, mano, mantes, mantis, mantos, marginalis, marginata, marginella, maritima, marmorata, martia, maura, meditabunda, meditalnenda, meditata, melancholica, melanius, melanochrysa, melanopis, melanoptera, melanopyrrha, melanura, melinus, mellinus, mellinus, menthastri, merdaria, meridiana, merulina, mesoleuca, mesopotamiensis, metallina, meteorica, meticulosa, metus, micans, microleon, miliaria, minima, minimus, minor, minor domestica, minor larvarum, minuta, minutissima, minutus, moesta, molio, molitus, mollicula, monachae, moneta, morio, mortuorum, muliebris, mulinus, mulsus, muraria, murina, murorum, muscaria, mussitans, mutabilis, mutata, myennis, myopina, mystacea, naevia, naevosus, nana, napobrassicae, nasatus, nasuta, natans, navus, nebulosa, nectarea, nectareus, nectarina, nectarivora, nemorum, neustriae, nigra, nigricans, nigricolor, nigrina, nigripennis, nigripes, nigripilis, nigrita, nigromarginata, nitens, nivalis, nobilis, nobilitata, noctiluca, nora, norwegica, nosatus, notata, nova, novemmaculata, novempunctata, nugater, nugator, obfuscata, obscoena, obscura, obsidianus, obsoleta, obtusipennis, ochracea, ochroleuca, ochroptera, ochropus, octopunctata, ocymi, oenopota, oestracea, oleae, olens, olivacea, onopordinis, oppidana, oratoria, orbiculata, orbiculus, orior, ornate, ornithovora, osiris, ovipara, pabulorum, pagana, paganus, pallida, pallipes, palmipes, palpator, palustris, pandia, pantherina, papatasi, paralleli, parallelus, parasitica, parcus, parietina, parralleli, parrallelus, parrelleli, parviceps, parvula, parvulus, pascuorum, pavida, pedella, pedissequus, pedo, pellita, pellucens, pendula, pennipes, peragro, percussus, perelegand, perelegans, perexilis, perexillis, permundus, pernix, personata, personatus, pertinax, pervenio, petronella, phalaenarum, phasiaeformis, picata, picea, piceae, pigra, pilosa, pinastri, piniperdae, pinivorae, pipiens, pipines, placida, planifrons, plebeja, plombea, plumata, plumbea, plumipes, plumosa, pluvialis, podagrica, poeciloptera, polisma, polita, politus, polyzonias, porca, porcina, potens, potentillae, praeceps, praedo, praepotens, praeusta, prasina, pratorum, princeps, procedo, processioneae, prodeo, prodromaria, profuges, profugus, prolabor, prolapsa, prolapsor, promano, promans, properans, prostrata, provenio, pruinosa, psyllia, puber, pubera, puberula, pubiceps, pudefactus, puella, pulchella, pulchra, pulicaria, pulla, pullata, pumila, pumilionis, punctata, punctatus, punctifera, punctulata, punctum, pungens, puparum, purmundus, pusilla, putris, pyrastri, pyrorum, quadrata, quadricolor, quadrifasciata, quadrimaculata, quadrimaculella, quadripunctata, quadripustulata, quadristrigata, quadrum, quinquefasciata, quinquepunctata, radiata, radicum, rapax, rara, rau, reccumbo, recedans, recta, recurro, redambulo, redeans, redeo, redians, reditus, regalis, regina, relictus, remigro, repens, rerumbo, resinellae, resinosa, restitituo, restituo, reticulata, reversio, reverto, reviso, revolo, rex, ribesii, riparia, rivularis, roralis, rosae, rosarum, rostrata, rotundata, rubiginea, rubripes, rudis, rufa, ruficapilla, ruficauda, ruficaudis, ruficeps, ruficornis, ruficrus, rufifrons, rufina, rufipalpis, rufipes, rufiventris, rufomaculata, rugosa, rumicis, ruralis, rustica, rutillus, rutilo, sabaeus, sacalis, saltatrix, saltitans, saltuum, sandaracha, sanio, saniosa, sannio, scabiosae, scalaris, scitule, scitulus, scitus, scolopacea, scolopacina, scripta, scutata, scutellaris, scutellata, scybalaria, secalis, segetum, segmentaria, segnis, sellata, semiargentata, semiargentea, semicaerulea, semiflava, semiluctifera, seminationis, semirufa, semulater, semulator, senilis, seplasia, sepulchralis, sepulcralis, serena, sericata, sericea, serpo, serrata, serratula, serratulae, setaria, seticornis, setosa, sexdentata, sexmaculata, sexpunctata, sigmoidea, signata, silentis, silvarum, silvestris, similis, simulater, simulator, sinensis, singenesiae, singularius, smaragdina, socia, socio, solicitus, solivagus, solor, solstitialis, sonchi, sordida, spatula, speculifera, sphegea, spinifera, spinipes, spitzbergensis, splendens, splendida, spoliata, spondylii, squalida, squamata, squamifera, stabulans, stellata, stercoraria, stictica, stigma, stimulans, striata, strigata, strigosa, strigula, striolata, structus, strumosa, stuans, stylata, subcoleoptrata, subcutanea, sublatus, subpuncta, subsultans, subtomentosa, subulata, subvariegata subventus, succincta, suecica, sugillatrix, suilla, surinamensis, sylvarum, syngenesiae, tabaniformis, tachinoides, taeniata, tarda, tardigradus, tarditas, tartidus, tau, tegularia, tempestiva, temula, tenax, tenebricus, tener, tentaculata, tenur, teres, terrestris, tessella, tessellata, testacea, tetragona, thalassina, thuscia, thymastri, tiberina, tibetana, tibialis, tigrina, timeo, timidus, tipulaea, tipularia, tipuliformis, tomentosa, topiaria, torvis, torvus, transfuga,transversa, trelineata, tremula, triangula, tricolor, tridens, trifasciata, trigrammica, trileniata, trilenva, trilineata, trimaculata, trinervis, tringaria, tripunctata, triquetra, tristis, tristor, truncata, tuberculata, tuberis, tuguriorum, turcica, tussilaginis, uliginosa, umbellatarum, umbelliferarum, umbraculata, umbrarum, unguicornis, ungulata, unicolor, univalvis, unxia, urbanus, urticae, vaccarum, vaccina, vacua, vagabunda, vagans, vagatoria, vagus, valens, valentina, valga, validus, vallata, vanella, varensis, varia, variabilis, varians, variata, varicus, variegata, varieus, variolosa, vecors, velox, venosa, ventito, vermileo, verna, vernicina, versicolor, versicolorata, versipellis, vespaesimilis, vespertina, vespiformis, vespillo, vibrans, vicanus, viduata, villosa, vinulus, violacea, virens, virescens, viridana, viridescens, viridi-caerulea, viridula, vitrata, vitreus, vitripennis, vivipara, vivipara major, vivipara minor, volets, volito, volvulus, vomitoria, vorax, vulpina, zonaria.

Unknown: atra, bicolor, capensis, carinata, castanea, colombaschensis, costata, doclea, elevata, flavipes, fusca, gigantea, helvola, leucosticta, melanoptera, rubiginosa, ruralis, solstitialis, syrphus, vilis, villica.

## Index to names by current taxonomic position

Acalyptrate: commoror, comoror, hirsuta; leporinus, sigmoidea, simulater, simulator, timidus.

Acanthiophilus: helianthi. Achanthiptera: inanis. Acinia: fucata, furcata,

Aciura: coryli.

Acrocera: orbiculus.

Acroceridae: gibbosa, orbiculus.

acromion: longipes. Actia: resinellae. Adia: cinerella.

aeneus: leucocephala, macrophthalma,

punctata.

aethiops: scatophaga.

Agria: affinis. alba: cinerea.

albiceps: bibula, elara, emoda, felix,

himella. albicinctus: albicincta.

albifrontalis: australis.

albina: beckeri, speculifera.

albiseta: aratoria, crocus, oratoria.

albonotata: prospera. alceae: demandata. aldrichi: esuriens. Alliopsis: silvestris.

Allophora: affinis, hemiptera, nebulosa,

subcoleoptrata, tristis.

alpesa: congolensis. Amenia: leonina, varia. amentaria: nigrina, nitens.

amita: amica.

Anabarynchus: bilineata.

Anapunophyto: pusilla.

Angiometopa: ruralis. angulicornis: erinacea.

anilis: flavipes, ochropus.

Anisopodidae: bilineata, cinctus, fuscata, atriceps: boganidae. nigricans, punctatus, succincta.

annexa: bifasciata, dizonias.

annulatus: annulata.

Anomoia: permundus, purmundus.

Anthomyia: litus, pluvialis.

Anthomyiidae: albicincta, albula, ambigua, auctus, audaculus, bicolor,

buccata, cinerea, cinerella, coarctata,

comio, comis, conformis, conica. decore, dubia, dubitata, exactus, excors, exilis, flavipennis, flavipes, floralis, fungorum, grisea, hilaris, lancifer, laticornis, lenio, lenis, liturariae, litus, longula, myopina, napobrassicae, parvula, pluvialis, praepotens, processioneae, pudefactus, radicum, reditus, rufina, rufipes, rumicis, silvestris, socia, solor, strigosa, striolata, structus, testacea, transversa, vagans, variata, volito.

Anthomyiidae?: cristata. Anthrax: aethiops, anthrax. Anthrax: hottentotta. antiqua: liturariae.

Aphyssura: dubia. aquatica: graminum.

arbustorum: horticola, nemorum, paralleli, parralleli, parrelleli.

Archytas: diaphana, hystrix, pilosa. Arctophila: fulvus, mussitans.

arcuatum: arcuata, bipunctata, festiva, imbellis.

Argyra: diaphana, ludeus, semiargentata, semiargentea.

argyrocephala: frontalis, leucocephala. arrogans: cimecoides, cimicoides.

arvorum: aruorum, quadrilineatus, trancuebarica.

Asarkina: ericetorum, salviae.

aterrima: brevis.

Athericidae: atherix, chrysopus, flavipes, maculatus.

Atherix: atherix, chrysopus, flavipes, maculatus.

atra: aterrima.

Auchmeromyia: luteola. audacula: audaculus.

augur: dorsalis.

auratus: tomentosa. auriceps: opulenta.

aurifinis: auriflua. aurulenta: evonymellae.

australis: donysa, maronea, tessellata.

autissiodorensis: flavipalpis.
autumnalis: bovina, campestris,
continua, coruina, corvina, floralis,
grisella, ludifacies, ludifica, ovipara,
prashadii, prostrata, rau, restitituo,
restituo, riparia, rustica, tau.

Azelia: ornate, triquetra.
azurea: pervenio, reviso, violacea.
Baccha: elongata, perexilis, perexillis.
Bactrocera: ferruginea.
Bactromyia: evonymellae.
barda: americana.

Baumhaueria: angusticornis. Bellardia: agilis, dolens, pandia,

puberula, pusilla, unxia, vespillo. Belvosia: aldrichi, bifasciata, esuriens. Bengalia: favillacea, iciuna, iciuna.

Bengalia: favillacea, ieiuna, jeiuna, jejuna, pallens, torosa, varicolor.

Beris: chalybata, chalybea, chalybeata, clavipes, rex, sexdentata, similis, vallata.

bezzii: pilosa.

Bibio: bidentata, hortulana.

Bibionidae: bidentata, ciliata, hortulana, novemmaculata, tuberculata.

bicinctum: bicincta, bicinctata, callosus.

bilineatus: bilineata. Billaea: rutilans, sensifera.

bipunctatus: bipunctata.

Blaesoxipha: lineata.

Blattariae: lithophila. Blera: fallax, ruficaudis, semirufa.

Blondelia: pinivorae. Bogosiella: fasciata.

bombylans: hirsutissima, melanopyrrha, plumata, plumosa.

Bombyliidae: aethiops, anthrax, bicolora, capucina, denigrata, fusca, hirsuta, hottentotta, lar, lucifer, maura, melanoptera, morio, nigrita, polyzonias, sabaeus, satyrus, sphinx, sylvanus, troglodyta.

Bombyliidae?: capensis. Borophaga: subsultans. Botanophila: cinerea, striolata.

Bothrophora: lupina. Brachyopa: arcuata, conica.

Bradysia: maura, morio.

brassicaria: cylindrica. brunneum: brunnea, esuriens, exinanita, inanis.

cadaverina: aurulans, compressa, ilerda, lilaea, mortisequa.

caesar: azurea, cadaverina, fulges, ruficeps, splendida, viridi-caerulea.

caesio: lychnidis.

calleva: cuthbertsoni.

Calliopomyia: glabrata.

Calliphora: affinis, aucta, augur, australis, carnaria, carnivora, coerulea, dorsalis, erythrocephala, flavipalpis, fulvimaculata, genarum, laemica, laticornis, minimus, obscoena, placida, quadrimaculata, sacra, scutellata, spitzbergensis, stygia, thuscia, vicina, violacea, viridescens, vomitoria.

Calliphoridae: abdominalis, accincta, affinis, agilis, albiceps, alni, amentaria, anthracina, atramentaria, aucta, augur, aurulans, australis, azurea, bata, bibula, bicolor, bigemmis, bivittata, boganidae, cadaverina, cadaverum, caerulea, caerulescens, caesar, caesarina, caesarion, calliphoroides, carnaria, carnarida, carnivora, caruca, certima, chalybaea, chilensis, chloropyga, chrysocephala, chrysoides, chrysorrhoea, cinerea, cluvia, coerulea, cognata, collecta, combrea, compressa, concinna, confixa, conflagrans, consobrinus, costalis, cuprea, cuprina, defixa, degener, delectans, depressa, diffusa, dioclea, discolor, ditissima, divisa, dolens, doronici, dorsalis, dotata, dubia, dux, elara, emoda, equestris, eristaloides, erythrocephala, exempta, eximia, familiaris, fasciata, favillacea, felina, felix, flavicans, flaviceps, flavipalpis, floralis, fortunata, fucina, fulges, fulvicornis, fulvimaculata, fulvipalpis, fumipennis, fuscipennis, gamelia, genarum, gentilis, germana,

gloriosa, groenlandica, hebes, hederacea, himella, hortona, icela, ieiuna, ilerda, illustris, impavida, incerta, inconclusa, inducta, infixa, ingens, inscribens, insularis, intermedia, ionia, jejuna, jejuna, laemica, lagyra, laniaria, lanio, laticornis, leonina, leucocephala, leucoptera, ligurriens, lilaea, lunata, luteola, lyrcea, macellaria, macularis, Cardiacephala: longipes. malansi, marginalis, marginifera, megacephala, melanoptera, mesembrinoides, metilia, micans, minima, minimus, mollis, mortisequa, mortuorum, munda, muralis, nana, nigriceps, nigrina, nigromarginata, nitens, nitescens, nobilis, obscoena, obscura, obscurata, olivacea, opulenta, orientalis, orior, pallens, pandia, parvula, patiens, perlata, pervenio, phauda, phellia, pionia, placida, polisma, porphyrina, promittens, prospera, proxima, pruinosa, puberula, pulchra, pumila, punctulata, purpurascens, purpurea, pusilla, putoria, putrida, quadrilineata, quadrimaculata, recta, recurro, reflectens, regalis, regina, remigro, remuria, reviso, rudis, ruficeps, ruficornis, rufipalpis, rufipes, sacra, sarcophagoides, scutellata, segmentaria, selecta, semicaerulea, sepulcralis, serenissima, sericata, serva, silvarum, chamaeleon: spatula. solaia, sordida, spitzbergensis, splendida, stygia, suffusa, taniaria, tegularia, temperata, terminata, thalassina, thuscia, tifata, torosa, trifascia, turbida, umbrifera, unxia, vagabunda, varensis, varia, varians, varicolor, ventito, verena, vespillo, vicina, violacea, viredaurea, virens, virescens, viridaurea, viridescens, viridi-caerulea, vivipara minor, vomitoria.

Calobata: petronella. Calocarcelia: cingulata. Calythea: albicincta.

campestris: macrocephala. campestris?: cephalotes. canicularis: lateralis, minor, socio. caninum: canina, chrysostoma, volets. cannabina: alternata, balteata, elegans, inaequalis, nectareus, nectarina, scitule, scitulus.

Capnoptera: scutata. Carcelia: processioneae. carnaria: vivipara major. carnaria?: colossus. Carpophthoromyia: vittata. casei: atrata. Catapicephala: ingens, micans. cautum: cautus.

celsa: celsus, quadrimaculata, quadrimaculella, signata.

cemiteriorum: caemeteriorum, lineolata. Centrophlebomyia: furcata. ceratocera: cornuta.

Ceratolauxania: elevata.

Ceriana: adunata, conopsoides, univalvis. Ceromyia: flaviceps.

Cerotelion: lineata, striata. Ceroxys: hortulana, hyalinata, urticae. chaerophylli: variegata.

Chaetotheresia: crassa.

Chalcosyrphus: femorata, longipes,

chalybata: chalybea, chalybeata, sexdentata.

chalybeata: promano, promans.

Chamaemyiidae: atratula, gibbosa.

Chamaepsila: rosae.

Cheilosia: aenea, bardus, coryden, corydon, flavicornis, fulva, funebres, funebris, funibres, hortulana, illustratus, merulina, prasina, tarditas, tartidus.

Chirosia: flavipennis.

Chloromyia: aurata, cicur, formosa.

Chloropidae: avenae, calamitosa, clavicrus, erro, frit, hordei, lepidus, lineata, minuta, nasuta, nigra, pigra, planifrons, pulchella, pumilionis,

quadristrigata, saltatrix, scutata, strigula, umbelliferarum, umbraculata. Coelopidae: frigida, relictus, simulator.

Chloroprocta: purpurea.

Chlorops: lepidus, lineata, nasuta, pulchella, pumilionis, quadristrigata, saltatrix, strigula, umbelliferarum.

chloropyga: bigemmis, hebes, putoria.

Chlororhinia: exempta.

Cholomyia: acromion, longipes.

Choloroprocta: violacea.

chrysame: varia.

Chrysogaster: caemeteriorum, cemiteriorum, lineolata, lucida, speculifera.

Chrysomya: albiceps, bata, bibula, bigemmis, chloropyga, combrea, defixa, dux, elara, emoda, felix, flaviceps, hebes, himella, marginalis, megacephala, orientalis, putoria,

Chrysopilus: asiliformis, cingulata, cristata, tomentosa.

Chrysotoxum: arcuata, bicincta, bicinctata, bipunctata, callosus, cautus, chrysozonias, fasciata, fasciolata, festiva, imbellis.

Chrysotus: nigripes.

Chyliza: extenuata, leptogaster.

Chyromya: flava, luteola, ochrapesus, oppidana.

Chyromyidae: flava, luteola, ochrapesus, corrigiolata: filiformis, strumosa. oppidana.

cibaria: cothurnata.

cincta: vacua.

cinctus: cincta, succincta.

cingulatus: pacifica.

clausa: aenea.

clavatus: clavata, filata.

clavicornis: univalvis.

clavipes: clauipes, curvipes.

Cliorismia: ardea.

Clitellaria: coccinea, ephippium, inda, sellata.

Clytiomyia: continua, deceptoria. coalescens: abdominalis.

Cochliomyia: certima, erythrocephala, fasciata, laniaria, macellaria, phauda, taniaria, turbida.

Coelopa: frigida.

Coenomyia: australis, crucis, ferruginea,

grandis, olens, testacea.

Coenosia: agromyzina, flavicornis, geniculata, intermedia, mollicula, pedella, pumila, rapax, tigrina.

coeruleifrons: trita. Comatacta: tricincta.

Compsobata: cibaria, cothurnata.

Compsomyiops: caruca, gamelia, lyrcea, verena.

Comptosia: sylvanus.

conducens: kweilinensis, lineata, lucens, praecox, pulla, scapularis.

Condylostylus: longicomis. confiscata: fasciata, minuta, conspersa: conspersus.

convexifrons: gibsoni. convexifrons?: latiparafrons.

Copestylum: brunnea, esuriens, exinanita, inanis, vesiculosa.

Cordilura: puber, pubera.

Cordyligaster: compressa, petiolata. Coremacera: cincta, cribrata, limbata,

marginata, tristis. corni: pagana, princeps.

cornicina: amoena, caesarion, chloris, connexa, cornicena, heraea, ingredior, puella, redeo.

corydon: coryden.

coryleti: coryletti, reticulata. Cosmina: punctulata, virens.

crassipennis: aurifrons, brachyptera, dimidiata, taeniata.

crassipes: elephantopus.

crassirostris: inconstans, insignis,

modesta. Craticulina: rufifrons, tabaniformis.

cristatus: cingulata, cristata. cruentatus: cruentata.

crux: crax.

Cuphocera: varia.

cuprarius: capraria, cupraria, violacea.

cuprea: nitens, rutilo.

cuprina: fucina, serenissima, temperata, varians.

Curtonotidae: gibba. Curtonotum: gibba. Cuterebra: americana. Cuterebridae: americana, semiatra. cyanella: mano.

cyaneus: agilitas, albimana, cyanea, vivax.

cyanicolor: occidentis, seplasia.

cyanophthalma: annulata. cylindricornis: chrysoptera.

cylindricus: cylindracea.

Cylindromyia: brassicaria, cylindrica.

cynipsea: elongata, vibrans.

Cynomya: aurulans, chrysocephala, compressa, ilerda, lilaea, mortisequa, mortuorum.

Cyrtoneurina: grisea.

Dacus: oleae.

Dasyphora: pratorum, versicolor.

Dasysyrphus: consisto, pinastri, pyrorum. delectans: conflagrans.

Delia: albula, coarctata, dubia, floralis, liturariae, napobrassicae, radicum.

Delphinia: picta.

Dexia: germanica, plebeja, provenio, rustica, vacua.

Dexiosoma: canina, chrysostoma, volets. dorsalis: ferruginea.

Dexopollenia: trifascia.

diabolus: ciliata, spinipes.

diadema: rostrata.

Dialineura: anilis, flavipes, ochropus.

diaphana: ludeus. diaphanus: diaphana.

Dictya: umbrarum.

diffidens: optata, perfixa, refixa. Dilophus: ciliata, novemmaculata,

tuberculata.

Dinera: carinifrons, ferina, grisescens. Diplonevra: florea, florescens.

discalis: lateralis.

distincta: obscura.

Dolichopodidae: amicula, caudex, ciliata, diadema, diaphana, equestris, festiva, gibba, hebes, ingruo, ingrus, joco, lacustris, longicornis, ludeus, ludicrous, ludicrus, nigripes, nobilitata, notata, pallipes, plumipes, quadrifasciata, rostrata, sanio, sannio, semiargentata, semiargentea. squamata, squamifera, ungulata, virens.

Dolichopus: gibba, plumipes, squamata, squamifera, ungulata.

domestica: analis, antiquissima, atrifrons, aurifacies, aurulans, australia, australis, basilaris, campicola, chilensis, consanguinea, contigua, dawsoni, determinata, divaricata, divisa, domestica major, flavifacies, flavinervis, flavipennis, frontalis, fulvescens, gymnosomea, harpyia, hottentota, lateralis, minor, multispina, nancauriensis, nebulo, nigricans, obscura, oceanica, pampasiana, pellucens, rivularis, rufifrons, rufiventris, sanctae-helenae, senegalensis, sordidissima, soror, stomoxidea. taitensis, tiberina, umbraculata, vaccina, vagatoria, vicaria, vicina.

domestica?: conosoma. domitor: albolineata.

doronici: melanoptera.

Doros: conopsea, profuges, profugus.

Dorycera: aquatica, graminum.

Drosophila: cellaris, erythrophthalma, funebris, oenopota.

Drosophilidae: cellaris, coleoptrata, erythrophthalma, funebris, furta, oenopota.

Drymeia: decolor, hamata, mantes, mantos, vicanus.

Dryomyza: flaveola.

Dryomyzidae: flaveola, melinus, mellinus, mulinus.

dubia: luteola, placida.

Dufouria: promano, promans.

Ectophasia: aurifrons, crassipennis.

elata: alata, elater. elegans: formosa.

Elgiva: cucularia, rufa, solicitus.

eligans: elegans, interrupta. Emmesomyia: socia.

Empididae: arrogans, cimecoides, cimicoides, cursitans, cursoria, globulipes, grossipes. Engistoneura: lugens, moerens. Ensina: sonchi, subcutanea. ephippium: coccinea, inda, sellata. Ephydridae: manicata, mantis. Epistrophe: elegans, eligans, formosus, interrupta.

Episyrphus: alternata, balteata, cannabina, elegans, inaequalis, nectareus, nectarina, scitule, scitulus.

equestris: bombyliformis.

Eriothrix: demano, dimano, lateralis, rufomaculata.

Eriozona: erratica.

Eristalinus: aruorum, arvorum, ater, leucocephala, macrophthalma, melanius, punctata, quadrilineatus, quinquelineata, quinquestriata, sepulchralis, tranquebarica.

Eristalis: americana, apiformis, arbustorum, cinctus, cryptarum, fuscus, horticola, interruptus, intricaria, intricata, leneatus, lineatus, fenestratus: nigrita. lineolae, lunula, lyra, murorum, nemorum, obfuscata, oestracea, paralleli, parralleli, parrelleli, porcina, fernandica: leucocephala.

Ernestia: puparum, redambulo, torvis, torvus.

errans: erratica.

Euboettcheria: tessellata.

Eudasyphora: cyanella, mano, occidentis, seplasia.

Euleia: centaureae, flauescens, heraclii, onopordinis, subcutanea.

Eumerus: lineata, lunata.

Eumesembrinella: quadrilineata.

Euphranta: connexa, crax, crux.

Euphumosia: bivittata, calliphoroides, eristaloides.

Eurychaeta: alni.

Eustalomyia: hilaris.

Euthycera: chaerophylli, fumigata, rufifrons, variegata.

Eutrichota: praepotens.

Euxesta: annonae, costalis.

evecta: evectus, lucorum. eximia: insularis.

Exoprosopa: capucina.

Exorista: larvarum, larvincola, major larvarum, monachae.

fabricii: cincta.

fallax: ruficaudis, semirufa.

falleni: ruralis, vagans.

Fannia: alevo, allevo, canicularis, clemens, fuscula, lateralis, lepida, lustrator, minor, minor domestica, scalaris, serena, socio.

Fanniidae: alevo, allevo, canicularis, clemens, fuscula, lateralis, lepida, lustrator, minor, minor domestica, scalaris, serena, socio.

fasciata: cingulata.

fasciata?: palmipes, properans.

fasciatum: chrysozonias, fasciata.

fasciolatum: fasciolata.

femoralis: geniculata.

femoratus: femorata, longipes.

fenestralis: saltitans, senilis, spoliata, tarda.

fera: reccumbo, rerumbo.

Ferdinandea: nitens, ruficornis, rutilo.

ferruginea: australis, crucis, grandis, olens, testacea.

festiva: anteaimbulo, anteambulo, citreofasciata, citrofasciata, vespiformis.

fimetaria: flava, rufa.

flava: luteola, ochrapesus.

flavipennis: quadrilineata.

flavipes: chrysopus.

fletcheri: jacobsoni.

floralis: micans, sepulcralis.

florea: atropos.

florescens: florea.

forcipata: maura, morio. formosa: aurata, cicur.

formosana: greeni, shanghaiensis.

Formosia: mirabilis.

frit: avenae, hordei, nigra. fuciformis: fusiformis.

fulva: libatrix, ochracea.

fulvicrura: caruca, gamelia, lyrcea.

fumigata: rufifrons.

funebres: funebris, funibres.

funebris?: cellaris, erythrophthalma,

oenopota.

fuscatus: fuscata, nigricans.

fuscipennis: punctulata.

gabonensis: natalensis.

gavisa: chalybea.

genarum: laticornis.

geniculata: urbanus.

gentilis: caerulea, cognata.

Geomyza: combinata.

glaucia: depressa.

globosum: globosa.

globula: lingens.

gloriosa: costalis, diffusa.

Gonia: capitata, crassicomis, piniperdae.

goniaeformis: angusticornis.

Goniocera: hartigii.

granditarsus: confusus, granditarsa,

ocymi.

Graphomya: adumbrata, compunctor,

compunctus, eustolia, idessa, leucomelas, maculata, praedicens,

stipata, vulpina.

grisella: grisea.

grossulariae: formosus.

guttata: longipes.

Gymnosoma: cerinus, costata, globosa,

hemisphaerica, rotundata.

Haematobia: irritans.

halterata: maura.

halterata?: nigrita.

Hebecnema: nigricolor, nigrita,

vespertina.

Heleomyza: latrinarum, serrata.

Heleomyzidae: avarus, dejectus,

latrinarum, sandaracha, serrata,

tuberis.

Helina: atricolor, celsus, concolor,

depuncta, evectus, fictor, impuncta, interpuncta, lucorum, obtusipennis,

quadrimaculata, quadrimaculella, quadrum, reversio, revolo,

sexmaculata, signata, subpuncta,

uliginosa, virescens.

Heliozeta: helluo.

Helophilus: cingulatus, pacifica,

parallelus, parrallelus, pendula, seelandica, trelineata, trileniata,

trilenva, trilineata, trilineatus.

Hemilucilia: segmentaria.

Hemipenthes: bicolora, denigrata,

hirsuta, maura, morio.

hemiptera: affinis, tristis.

Hemipyrellia: fortunata, leucocephala,

ligurriens, phellia, pulchra, solaia.

hennigi: rosae.

Heptatoma: pellita.

heraclii: centaureae, onopordinis,

subcutanea.

Herina: frondescentiae.

Hermetia: illucens, leucopa.

Hilara: globulipes.

Hoplitimyia: mutabilis, variabilis.

Hoplocheiloma: fabricii, fasciata,

totliana.

hortensia: hortulana.

hortona: icela.

hortorum: importuna.

hortulanus: hortulana.

hugonis: longipes.

hyalinata: hortulana.

Hydromya: dorsalis.

Hydromyza: livens.

Hydrophoria: conica, dubitata, lancifer,

lenio

Hydrotaea: armipes, ciliata, constane,

constans, curvipes, dentipes,

diabolus, glabricula, hirticeps,

diabolus, giabiledia, illideeps,

ignavus, irritans, meteorica, spinipes,

vaccarum.

Hylemya: strigosa, vagans, variata, volito.

hyoscyami: cinerea, leontodontis.

Hypoderma: ascarides.

confinis, consimilis, cornuta, deduco, Hypopygiopsis: fumipennis, infixa.

iavana: varia.

ibis: atherix.

ichneumonea: aristata.

idioidea: purpurea, violacea.

ieiuna: favillacea, jeiuna, jejuna.

ignava: ignavus, pigra.

Ilione: albiseta, aratoria, crocus, oratoria. Lejogaster: metallina, politus.

illucens: leucopa.

illustrata: fulva, illustratus.

illustris: equestris, muralis, parvula.

impavida: concinna.

impuncta: interpuncta, revolo, virescens.

inanis: annulatus, apivora, micans,

trifasciata.

incana: nemorum.

incisilobata: striata.

incisuralis: cuprea.

inferior: gurnei, gurneyi.

ingruo: ingrus.

intermedium: costata.

interrupta: fuscus, interruptus, lineolae,

obfuscata.

interruptella: interrupta.

intricaria: fuscus, intricata.

iridatus: caerulescens, indicus, iridata.

Ischiodon: nigra.

Isomerocera: quadrilineata.

Isomyia: chrysoides, confixa,

conflagrans, delectans, ditissima, dotata, munda, reflectens, selecta, terminata, viredaurea, viridaurea.

Iteuthelaira: esuriens.

jamaicensis: nigrana, nigrita.

Keroplatidae: lineata, longicornis,

macroceras, striata.

labialis: depressa. labiata: pallens.

lacustre: lacustris.

laesus: nigripes.

lancifer: conica, dubitata.

larvarum: erucarum, larvincola, major

larvarum, monachae.

larvipara: corvinoides, mesopotamiensis, longula: parvula.

vivipara.

lasciva: lasciua.

Lasiopa: villosa.

lasiophthalma: polita.

latifrons: obsoleta.

lauta: polita, proerna.

Lauxania: chrysoptera, cylindricornis.

Lauxaniidae: caeruleophthalmica, chrysoptera, cylindricornis, deduco, elevata, glabrata, longipennis, lupulina, mulsus, quadripunctata.

Lejops: femorata, interpunctus, transfuga.

lepida: parcus.

Lespesia: marmorata.

leucocephala: semiargentata,

semiargentea.

leucomelaena: leucomelas.

Leucomyia: cinerea.

Leucophora: buccata, grisea.

Leucopis: atratula.

Leucostoma: aterrima, brevis.

Leucozona: asiliformis, depressa,

glaucia, laternaria. Leucozona: lucorum.

leucozona: lucozona.

levida: assimilis, borealis, levidus.

Liancalus: virens.

ligurriens: fortunata, solaia.

Ligyra: satyrus, sphinx.

limbipennis: virens.

Limnia: flavifrons, unguicornis, varicus, varieus.

Limnophora: notata, riparia, triangula.

lincensis: longicornis.

lineata: cinctus, leneatus, lineatus.

lineatus: femorata.

Linnaemya: investigator.

linogrisea: lenio.

Lispe: tentaculata. Lispocephala: verna.

Litorhina: lar.

Lomatia: sabaeus.

Lonchaea: chorea, vernicina.

Lonchaeidae: chorea, vernicina.

longicornis: strigata, tenebricus.

longipes: atra.

lopesi: pusilla. Lophosceles: mutata.

Loxocera: aristata, ichneumonea, vagus.

lucidula: africana.

Lucilia: azurea, cadaverina, caerulea,

caerulescens, caesar, caesarina,

caesarion, cluvia, cuprina, equestris, eximia, fucina, fulges, illustris,

inducta, inscribens, insularis, ionia, lagyra, marginifera, metilia, muralis,

nigriceps, nitescens, nobilis, parvula,

pionia, porphyrina, purpurascens, regalis, ruficeps, serenissima, sericata, silvarum, splendida, tegularia, temperata, tifata, varians, viridi-caerulea.

lucorum: asiliformis. lugubris: dirae, moesta.

lunatus: lunata. lurida: hirsuta.

lusoria: kihuris, spinohumera, teste.

lustrator: clemens.

macellaria: certima, erythrocephala, fasciata, laniaria, phauda, taniaria,

turbida.

Macquartia: pubiceps.

Macrocera: longicornis. macrocera: longicornis.

Macrocera: macroceras.
Macrorchis: meditata.

maculata: compunctor, compunctus, vulpina.

maculatus: maculata.

maculipennis: arcuata. magellanica: incerta.

mallochi: squamata.

Mallota: fuciformis, fusiformis. marginata: cribrata, limbata, tristis.

marginifera: marginalis.

marmorea: flauescens.

marsya: chrysotelus. Masicera: crassiseta.

maurus: denigrata, hirsuta, maura.

Medetera: diadema, rostrata.

Medinophyto: dilecta.

meditabunda: aluta, incurvata,

meditalnenda, nora.

megacephala: bata, combrea, dux,

flaviceps, remuria. meigenii: annulata.

Melanomya: minima.

Melanophora: grossificationis, interventum, roralis.

Melanostoma: facultas, mellina.

Melieria: crassipennis, gangraenosa. Melinda: anthracina, caerulea, cognata,

gentilis.

mellinum: facultas, mellina.

meridionalis: curvipes.

Merodon: bombyliformis, calcarata, clauda, clauipes, crassipes, curvipes, elephantopus, funesta, melancholica, natans, segetum.

Meromacrus: cincta, pinguis, pratorum. Meromyza: clavicrus, minuta, pigra, saltatrix.

Mesembrina: apiaria, bombinatrix, bombylina, bombylius, bombyloides, discolor, meridiana, mystacea.

Mesembrinella: bicolor.

Mesoblattina: lithophila.

Metallea: cuprea.

metallina: politus.

Metasyrphus: corollae.

meteorica: constane, constans, vaccarum. Metopia: frontalis, labiata, leucocephala.

Microchrysa: caesia, parvulus, polita, vitreus.

Microdon: apiformis, devia, mutabilis, nova, viridescens.

microleon: nigricans.

Micropeza: corrigiolata, filiformis, strumosa.

Micropezidae: annulata, cibaria, corrigiolata, cothurnata, ephippium, fabricii, fasciata, filiformis, lasciua, longipes, pedo, peragro, petronella, strumosa, totliana.

Microtropesa: sinuata.

Milesia: crabroniformis, naevia, semiluctifera, virginiensis.

miliaria: arcuata.

Minettia: longipennis, lupulina.

Mintho: cincta, compressa, praeceps, rufiventris, rutillus.

minuta: minor, minutior, pusillus.

Morellia: affixa, basalis, bipuncta, calisia, hortensia, hortorum, hortulana, importuna, nitida, ochricornis.

Morinia: doronici, melanoptera.

morio: bicolora.

mortuorum: chrysocephala.

muliebris: pulchella.

Musca: aethiops, afra, africana, alba, albina, albipennis, albomaculata,

alpesa, amica, amita, analis, angustifrons, antiquissima, asiatica, atrifrons, aurifacies, aurulans, australia, australis, autumnalis, bakeri, basilaris, beckeri, bezzii, biseta, bivittata, bovina, calleva, campestris, campicola, capensis, carnifex, cassara, chilensis, chui, cingalaisina, conducens, confiscata, congolensis, conosoma, consanguinea, contigua, continua, convexifrons, coruina, corvina, corvinoides, craggi, crassirostris, cuprea, curviforceps, curvinervis, cuthbertsoni, dasyops, dawsoni, determinata, dichotoma, divaricata, divisa, domestica, domestica major, dorsomaculata, efflatouni, elatior, ethiopica, eutaeniata, exalbida, fasciata, fergusoni, fieldi, flavifacies, flavinervis, flavipennis, fletcheri, floralis, formosana, freedmani, frontalis, fulvescens, fulvithorax, gabonensis, gibsoni, greeni, grisella, gurnei, gurneyi, gymnosomea, harpyia, heidiae, hervei, hilli, hoi, hottentota, hugonis, humilis, illingworthi, incerta, inconstans, indica, inferior, insignis, interrupta, interruptella, irwinrossi, jacobsoni, kasauliensis, kihuris, kweilinensis, larvipara, lasiopa, lasiophthalma, lateralis, latifrons, latiparafrons, liberia, lindneri, lineata, longipes, lothari, lucens, lucidula, ludifacies, ludifica, lusoria, malaisei, mallochi, mediana, melanura, meruensis, mesopotamiensis, minima, minor, minuta, modesta, multispina, munroi, nana, nancauriensis, natalensis, nebulo, negriabdomina, nevilli, nigricans, nigricruris, nigrithorax, niveisquama, obscura, oceanica, osiris, ovipara, pampasiana, patersoni, pattoni, pellucens, phasiaeformis, pilifacies, pilosa, planiceps, polita, pollinosa, praecox, prashadii, primitiva, prisca, promisca,

prostrata, pseudocorvina, pulla, pumila, pungoana, pusilla, rau, restitituo, restituo, riparia, rivularis, rufifrons, rufiventris, rustica, sanctae-helenae, santoshi, scapularis, scatophaga, senegalensis, seniorwhitei, setigera, setulosa, shanghaiensis, somalorum, sorbens, sordidissima, soror, spangleri, spectanda, speculifera, spinohumera, spinosa, splendens, splendida, squamata, stimulans, stomoxidea, striatacta, stuckenbergi, sugillatrix, taitensis, tau, tempestatum, tempestiva, terraereginae, teste, tiberina, tibetana, tibiseta, transvaalensis, ugandae, umbraculata, unisetula, vaccina, vagatoria, ventrosa, vetustissima, vicaria, vicina, villeneuvii, violacea, vitripennis, vivipara, wittweri, xanthomela, xanthomelas, yerburyi.

muscaria?: alni.

Muscidae: adumbrata, aenea, aerea, aethiops, affixa, afra, africana, agromyzina, alba, albina, albipennis, albolineata, albomaculata, alpesa, aluta, amica, amita, amoena, analis, angelicae, angustifrons, antiquissima, apiaria, aricioides, armipes, asiatica, assimilis, atra, atricolor, atrifrons, aurifacies, aurulans, australia, australis, autumnalis, bakeri, basalis, basilaris, beckeri, benedicta, bezzii, bipuncta, biseta, bivittata, bombinatrix, bombylina, bombylius, bombyloides, borealis, bovina, braesia, caesarion, caesia, calcitrans, calisia, calleva, campestris, campicola, capensis, carnifex, cassara, celsus, chalybea, chilensis, chloris, chrysotelus, chui, ciliata, cinerascens, cingalaisina, coeo, coerulata, coerulea, compunctor, compunctus, concolor, conducens, confinis, confiscata, congolensis, connexa, conosoma, consanguinea, consimilis, constane, constans,

contigua, continua, convexifrons, corni, cornicena, cornicina, cornuta, coruina, corvina, corvinoides, craggi, crassirostris, cuprea, curviforceps, curvinervis, curvipes, cuthbertsoni, cyanea, cyanella, dasyops, dawsoni, decolor, deduco, dentipes, depuncta, determinata, diabolus, diaphana, dichotoma, diffidens, discolor, dispar, distincta, divaricata, divisa, domestica, domestica major, domitor, donysa, dorsomaculata, efflatouni, elatior, electa, erinacea, erratica, ethiopica, eustolia, eutaeniata, evectus, exalbida, extranea, extrema, fasciata, fergusoni, fictor, fieldi, flavicornis, flavifacies, flavinervis, flavipennis, fletcheri, floralis, formosana, freedmani, frontalis, fulvescens, fulvithorax, fuscata, fuscipennis, gabonensis, gavisa, geniculata, gibsoni, glabricula, greeni, grisea, grisella, guineensis, gurnei, gurneyi, gymnosomea, hamata, harpyia, heidiae, heraea, hervei, hilli, hirticeps, hoi, hortensia, hortorum, hortulana, hottentota, hugonis, humilis, hyalinata, idessa, ignavus, illingworthi, importuna, impuncta, inanis, incerta, inconstans, incurvata, indica, inferior, ingredior, insignis, intermedia, interpuncta, interrupta, interruptella, intrahens, irritans, irwinrossi, jacobsoni, kasauliensis, kihuris, kweilinensis, laeta, lardaria, larvipara, lasiopa, lasiophthalma, lateralis, latifrons, latiparafrons, lauta, leucomelas, levidus, liberia, lindneri, lineata, litorea, longipes, lothari, lucens, lucidula, lucorum, ludifacies, ludifica, lusoria, luteipennis, maculata, malaisei, mallochi, mano, mantes, mantos, marginalis, maronea, marsya, mazaca, mediana, meditabunda, meditalnenda, meditata, meridiana, meruensis, mesopotamiensis, meteorica, minima, minor, minuta, modesta, mollicula. multispina, munroi, mutata, mystacea, nana, nancauriensis, natalensis, nebulo, negriabdomina, nemorum, nevilli, nigricans, nigricolor, nigricruris, nigrita, nigrithorax, nitida, niveisquama, nora, notata, nugater, nugator, obscura, obtrusa, obtusipennis, occidentis, oceanica, ochricomis, optata, ornate, osiris, ovipara, pabulorum, pagana, pallida, pampasiana, parviceps, pascuorum, patersoni, pattoni, pedella, pellucens, perfixa, phara, phasiaeformis, pilifacies, pilosa, planiceps, polita, pollinosa, praecox, praedicens, prashadii, pratorum, primitiva, princeps, prisca, prodeo, proerna, proferens, prolapsa, prolapsor, promisca, prostrata, pseudocorvina, puella, pulla, pumila, pungens, pungoana, pusilla, quadrimaculata, quadrimaculella, quadrum, racilia, rapax, rau, redeo, refixa, restitituo, restituo, reversio, revolo, riparia, rivularis, rufifrons, rufiventris, ruralis, rustica, sanctae-helenae, santoshi, sarsina, scapularis, scatophaga, scutellaris, senegalensis, senilis, seniorwhitei, seplasia, serena, setigera, setulosa, sexmaculata, shanghaiensis, signata, somalorum, sorbens, sordidissima, soror, spangleri, spectanda, speculifera, sperata, spinipes, spinohumera, spinosa, splendens, splendida, squamata, stabulans, stimulans, stipata, stomoxidea, striatacta, stuckenbergi, sublatus, subpuncta, subventus, sugillatrix, tahitiensis, taitensis, tau, tempestatum, tempestiva, tentaculata, terraereginae, testacea, teste, tiberina, tibetana, tibialis, tibiseta, tigrina, transvaalensis, triangula, triquetra, trita, tuguriorum, ugandae, uliginosa, umbraculata, unisetula, vaccarum,

vaccina, vagans, vagatoria, validus, variabilis, ventrosa, verna, versicolor, niger: nigra, rugosa. vespertina, vetustissima, vicanus, vicaria, vicina, vilis, villeneuvii, violacea, virescens, vitripennis, vivipara, vulpina, wittweri, xanthomela, xanthomelas, yerburyi. Muscina: assimilis, borealis, caesia, cinerascens, levidus, pabulorum, pascuorum, prodeo, prolapsa, prolapsor, stabulans, tibialis.

mutabilis: variabilis. mutatus: mutata.

Myathropa: atropos, florea.

Mydaea: corni, pagana, princeps, rustica. Notogramma: stigma.

Mydas: clavata, filata,

Mydidae: clavata, filata.

Myennis: octopunctata.

Myiophaea: aricioides.

Myiopharus: costalis.

Myoleja: caesio, lychnidis. Myolepta: luteola, potens.

Myopina: myopina.

Myospila: aluta, incurvata, meditabunda, Ochthera: manicata, mantis. meditalnenda, nora.

mystacea: apiaria, bombinatrix,

bombylina, bombylius, bombyloides, discolor.

nana: minima.

natans: melancholica.

nebulosa: ornate.

Nemopoda: cylindrica.

Nemotelus: albipes, marginata, marginella, pantherina, uliginosa.

Neoascia: annexa, bifasciata, dizonias, meticulosa, molio, podagrica, tenur.

Neomyia: amoena, benedicta, braesia, caesarion, chalybea, chloris, coerulata, coerulea, connexa, cornicena, cornicina, cyanea, diffidens, donysa, electa, gavisa, guineensis, heraea, indica, ingredior, intrahens, lauta, maronea, mazaca, obtrusa, optata, perfixa, phara, polita, proerna, puella, racilia, redeo, refixa, sarsina, sperata, trita.

Neria: ephippium. Neta: chilensis.

Neurigona: quadrifasciata.

nigricans: albicincta.

nigricosta: nitida. nigrifrons: variabilis.

nigrina: lateralis, nigripes.

nigripes: pinivorae. nitidula: cylindrica.

nobilitata: hirta, nobilis.

nobilitatus: ciliata, joco, ludicrous,

ludicrus, nobilitata. noctiluca: erratica, tristor. notata: nectarea, nectarivora.

notatus: notata.

novemmaculatus: novemmaculata,

tuberculata.

nubila?: cursoria. nubipennis: segmentaria.

nudibasis: resinellae.

Nyctia: halterata, maura, nigrita.

obesa: nebulosa.

obscurata: mesembrinoides.

Ocyptamus: cylindracea, cylindricus. Odontomyia: flavissima, hydroleon,

microleon, nigricans.

Oestridae: ascarides.

Ogcodes: gibbosa.

Onesia: germana, hederacea, mesembrinoides, micans, obscurata,

ruficornis, sepulcralis.

Oplodontha: jejuna, minor, minuta, minutior, pusillus, viridula.

Opomyza: florum, germinationis.

Opomyzidae: combinata, florum, galpinus, germinationis.

Opsodexia: serva.

Opsozelia: lateralis.

Orellia: falcata, punctata, stictica.

Ormia: punctata.

Ornidia: obesa.

Orthoceratium: lacustris.

Orygma: palpator.

Oscinella: avenae, frit, hordei, nigra. osiris: fulvithorax, sugillatrix.

Otites: formosa, lamed, porca.

Otitidae: aenea, alceae, annonae, aquatica, costalis, crassipennis, demandata, formosa, frondescentiae, gangraenosa, graminum, hortulana, hyalinata, lamed, myennis, octopunctata, picta, porca, stigma, urticae, vibrans.

Oxycera: graeca, hypoleon, muscaria, rara, tardigradus, trilineata.

Oxyna: parietina.

Oxysarcodexia: auriflua.

Palloptera: muliebris, pulchella, saltuum, umbellatarum, unicolor.

Pallopteridae: minutus, muliebris, pulchella, saltuum, umbellatarum, unicolor.

Palpada: agrorum, hortorum, surinamensis.

pandia: unxia.

pantherinus: albipes, marginata, marginella, pantherina.

panzeri: conica.

papua: calliphoroides.

papuensis: azurea, inducta, inscribens, marginifera, metilia, nitescens, tifata. Phyllomya: volvulus.

Paragus: cruentata, pusilla, thymastri.

parallelus: parrallelus.

Paramenia: macularis.

Paraprissopoda: gulo.

Parasarcophaga: ruficornis.

Paregle: audaculus.

Parhelophilus: frutetorum, versicolor, versicolorata.

Paroxyna: cinereus, cinerius.

pattoni: incerta, spinosa, yerburyi.

pedissequum: pedissequus.

Pegomya: auctus, bicolor, conformis, flavipes, fungorum, laticornis, rufina,

rufipes, rumicis, testacea, transversa.

Pelidnoptera: nigripennis.

pellucens: pellita.

pellucens?: deceptoria.

peltatus: timeo.

pendulus: pendula, trelineata, trileniata,

trilenva, trilineata.

penicillata: versicolor. perexilis: perexillis.

Pericallimyia: perlata.

Periscepsia: carbonaria.

pernix: haemorrhoidalis, striata.

peronii: braesia, cyanea, mazaca, phara, sarsina.

personata: apiformis, personatus.

pertinax: lunula.

Peteina: erinaceus.

petiolata: compressa.

Phaeomyiidae: nigripennis.

Phaonia: angelicae, erinacea, erratica, extranea, fuscata, laeta, nemorum,

nugater, nugator, pallida, rufiventris, scutellaris, sublatus, subventus,

testacea, tuguriorum, vagans, validus. Phasia: brachyptera, dimidiata, taeniata.

Pherbellia: punctata.

Pherbina: coryleti, coryletti, reticulata.

Phlebotomus: papatasi.

Phora: aterrima, festinans.

Phoridae: aterrima, festinans, florea, florescens, subsultans,

Phormia: accincta, bicolor, mollis,

proxima, regina, thalassina. Phumosia: dioclea, promittens.

Phyllomyia: cylindrica.

Physiphora: aenea, alceae, demandata.

Phytomia: crassa, errans, sinensis,

zonalis, zonatus.

picea: piniperdae.

Pierretia: sexpunctata.

pilifacies: hoi.

pilosus: hystrix, pilosa.

pinastri: consisto, pyrorum.

pinguis: cincta.

Piophila: atrata, casei.

Piophilidae: atrata, casei, cynophila,

furcata.

Piophilidae?: ornithovora.

pipiens: pipines.

Pipiza: dirae, erratica, lugubris, moesta,

noctiluca, tristor.

Pipizella: viduata.

Pipunculidae: cephalotes.

Pipunculus: cephalotes.

planiceps: chui, cingalaisina, indica,

pollinosa.

Platycephala: planifrons, umbraculata.

Platycheirus: agilitas, albimana, confusus, cyanea, dexter, granditarsa, navus, ocymi, rosarum, timeo, vivax. Psarus: abdominalis, coalescens. Platypalpus: cursitans.

Platyparea: discoidea, poeciloptera. Platypeza: palmipes, properans.

Platypezidae: palmipes, properans. Platystoma: fulviventris, seminationis,

variolosa.

Platystomatidae: fulviventris, lugens, moerens, naevosus, seminationis, singenesiae, syngenesiae, variolosa.

Platytropesa: opulenta. plebeja: fasciata. plumicornis: lineata.

plumipes: gibba. pluvialis: litus.

Pocota: apiformis, personatus.

podagrica: molio. Poecilanthrax: lucifer.

Poecilobothrus: ciliata, joco, ludicrous, ludicrus, nobilitata.

Poecilometopa: spilogaster.

Polietes: albolineata, domitor, lardaria.

polita: caesia, parvulus, vitreus. Pollenia: amentaria, atramentaria,

bicolor, caerulescens, cinerea, degener, depressa, familiaris, flavicans, floralis, fulvicornis, fulvipalpis, intermedia, lanio, nitens, obscura, olivacea, pruinosa, pumila, recta, recurro, remigro, rudis, quadrimaculata: fulvimaculata, sacra, ruficeps, ruficornis, rufipalpis, umbrifera, vagabunda, varensis, varia, varians, virescens.

Polleniopsis: inconclusa, patiens, sarcophagoides.

pomeroyi: fasciata. postica: heraclei.

posticus: elongata.

praeceps: cincta, rutillus.

profuges: conopsea, profugus. prolapsa: caesia, pabulorum, prolapsor.

Protocalliphora: azurea, carnarida, chrysorrhoea, pervenio, reviso,

sordida, violacea,

Protophormia: boganidae, groenlandica, orior.

Pseudogametes: semiatra.

Psila: fimetaria, flava, rufa. Psilidae: aristata, extenuata, fimetaria.

flava, histrionica, ichneumonea, leptogaster, longerro, longervo, luteus, percussus, rosae, rufa, vagus.

Psilidae?: rufa.

Psychodidae: papatasi.

Ptecticus: elongata, japonica, testaceus.

pubera: puber.

pubescens: ruficornis.

pubicornis: dolens, puberula.

pulchra: phellia. pulchripes: flavipes.

pumilionis: lineata, nasuta, saltatrix,

umbelliferarum. punctatus: bilineata.

punctella: cinereus, cinerius.

punctulata: hieracii. punctum: stigma. purmundus: permundus.

putris: conssencis, cossenico, fimeti.

Pycnomalla: splendens. pyrastri: mellina, rosae.

Pyrellia: aenea, coeo, extrema, fuscipennis, luteipennis, parviceps, proferens, rapax, serena.

leucoptera, macellaria, nana, nigrina, Pyrellina: chrysotelus, distincta, marsya, obscura.

violacea.

quadrum: subpuncta.

quinquelineatus: quinquelineata. quinquestriatus: quinquestriata.

radicum: napobrassicae.

rapax: aenea, coeo, fuscipennis, luteipennis, parviceps, serena.

rara: tardigradus.

Ravinia: haemorrhoidalis, moneta, pernix, striata.

regina: accincta, bicolor, mollis, proxima, thalassina.

Rhagio: annulata, lineola, maculata, scolopacea, tringaria, vanella.

Rhagionidae: annulata, asiliformis, cingulata, cristata, fasciatus, lineola, maculata, norwegica, scolopacea, tomentosa, tringaria, vanella.

Rhagionidae?: acuminata.

Rhagoletis: cerasi.

Rhamphinina: pica.

Rhingia: macrocephala, nasatus, nosatus, Sarcophila: latifrons, obsoleta.

Sargus: bipunctata, caerulescei

Rhinophora: parcus.

Rhinophoridae: atra, grossificationis, interventum, parcus, roralis.

Rhyncomya: collecta, concinna, divisa, felina, impavida, ruficeps.

ribesii: blandus, vacua.

Rivellia: singenesiae, syngenesiae.

rognesi: carnarida, chrysorrhoea, sordida. Scathophagidae: abbreviata, cloacaris, rohrelliformis: inanis. comito, exilis, livens, lucophaeus,

roralis: grossificationis, interventum. rotundatum: cerinus, hemisphaerica, rotundata.

rudis: caerulescens, familiaris, floralis, fulvicornis, fulvipalpis, nana, obscura, olivacea, pruinosa, pumila, recta, remigro, rufipalpis, varia.

rudis?: torvis, torvus.

rufifacies: orientalis.

rufiventris: nugater, nugator, scutellaris, testacea.

rufomaculata: demano, dimano, lateralis. rustica: plebeja, provenio.

rustica?: germanica.

rutilans: valida.

Rutilia: formosa, liris, regalis, retusa, splendida.

saltatrix: clavicrus, minuta, pigra.

Saltella: spondylii. saltuum: unicolor.

Sapromyza: caeruleophthalmica, quadripunctata.

Sarconesia: incerta.

Sarcophaga: carnaria, colossus, prolabor, reverto, serpo, valens, variegata, vivipara major.

Sarcophagidae: affinis, africa, auriflua, carnaria, cinerea, colossus, frontalis, gulo, haemorrhoa, haemorrhoidalis, halterata, hauriens, labiata, latifrons, leucocephala, lineata, martia, maura, moneta, nigrita, obsoleta, occidua, pernix, prolabor, pusilla, reverto, ruficornis, rufifrons, ruralis, serpo, sexpunctata, spilogaster, striata, tabaniformis, taenionota, tessellata, valens, variegata, vivipara major.

Sarcophila: latifrons, obsoleta.
Sargus: bipunctata, caerulescens,
capraria, cupraria, indicus, iridata,

Scaeva: mellina, pyrastri, rosae.
scalaris: alevo, allevo, minor domestica.
Scathophaga: comito, exilis, lucophaeus,
lucopheus, lutaria, merdaria,
scybalaria, stercoraria, suilla.
Scathophagidae: abbreviata, cloacaris.

comito, exilis, livens, lucophaeus, lucopheus, lutaria, merdaria, paganus, puber, pubera, scybalaria, stercoraria, suilla, tipularia.

Scatopse: nectarea, nectarivora. Scatopsidae: nectarea, nectarivora.

Scellus: notata.

Scenopinidae: albicincta, fenestralis, nigra, rugosa, saltitans, senilis, spoliata, tarda.

Scenopinus: albicincta, fenestralis, nigra, rugosa, saltitans, senilis, spoliata, tarda.

schoenherri: punctata.

Sciapus: ingruo, ingrus. Sciaridae: maura, morio.

Sciomyzidae: alata, albiseta, aratoria, chaerophylli, cincta, coryleti, coryletti, cribrata, crocus, cucularia, delicate, dorsalis, elata, elater, flavifrons, flavipes, fumigata, hieracii, limbata, marginata, oratoria, punctata, punctulata, reticulata, rufa, rufifrons, rufipes, solicitus, sphegea, spinipes, tener, tenur, tristis, umbrarum, unguicornis, varicus, variegata, varieus.

scita: scitus.

scolopaceus: scolopacea. Scotiptera: venatoria. scripta: invisito, molitus. Scutellomusca: scutellaris. scybalaria: lucophaeus, lucopheus. seelandicus: seelandica, trilineatus. segnis: contracta, fucatus, maritima,

melanochrysa. Seioptera: urticae, vibrans. semicinereus: hyalinata. semiluctifera: naevia.

seminationis: fulviventris, variolosa.

senegalensis: luteola. seniorwhitei: tibiseta. Senogaster: dentipes.

Sepedon: flavipes, rufipes, sphegea,

spinipes.

Sepsidae: conssencis, cossenico, cylindrica, cynipsea, elongata, fimeti, minimus, palpator, punctum, putris, spondylii, stigma, vibrans.

Sepsis: cynipsea, elongata, punctum, stigma, vibrans.

sepulchralis: ater, melanius.

seriata: rufifrons.

sericata: caerulescens, lagyra, nobilis, tegularia.

sericea: buccata.

Sericomyia: lappona, silentis, subtomentosa.

serrata: latrinarum. serratulae: serratula.

Servillia: argyrostoma, hirsuta, lurida.

setipyga?: collecta. setiventris: cornuta.

sexmaculata: deduco, uliginosa.

Silbomyia: fuscipennis, prospera.

silentis: subtomentosa.

silvatica: cinerea.

Simuliidae: colombaschensis. Simulium: colombaschensis.

singularior: singularius.

Siphona: geniculata, urbanus.

solennis: rumicis.

solicita: rufa, solicitus.

solivaga: solivagus.

solstitialis: arctii, dauci. sonchi: subcutanea.

sorbens: alba, bivittata, dichotoma, efflatouni, eutaeniata, exalbida, humilis, mediana, niveisquama, primitiva, promisca, pusilla, spectanda, stuckenbergi.

sperata: electa.

Sphaeroceridae: saniosa.

Sphaerophoria: invisito, menthastri,

molitus, scripta.

sphegeus: flavipes, rufipes, sphegea.

sphingivora: crassiseta. sphondylii: spondylii.

Spilogona: aerea, dispar, litorea,

marginalis.

Spilomyia: diophthalma.

spiloptera: grisea. spissa: aricioides.

splendens: splendida.

stabulans: cinerascens, prodeo, tibialis.

Stegana: coleoptrata, furta.

steini: fungorum.

stercoraria: exilis, merdaria.

Sterphus: jamaicensis, nigrana, nigrita.

stictica: punctata. stigma?: placida.

Stilbomyella: costalis, diffusa, gloriosa.

Stomina: tachinoides.

Stomorhina: discolor, lunata. Stomoxys: calcitrans, occidentis,

pungens.

Stratiomyidae: aequinoctialis, albipes, aurata, bipunctata, caerulescens, caesia, capraria, chalybata, chalybea, chalybeata, chamaeleon, cicur, clavipes, coccinea, cupraria, elongata, ephippium, flavissima, formosa, graeca, hydroleon, hypoleon, illucens, inda, indicus, iridata, japonica, jejuna, leucopa, marginata, marginella, melanopis, microleon, minor, minuta, minutior, muscaria, mutabilis, nigricans, pallipes, pantherina, parvulus, polita, pusillus, quadrilineata, rara, rex, sellata, sexdentata, similis, singularius, spatula, splendens, strigata, tardigradus, tenebricus, testaceus, trilineata, uliginosa, vallata, variabilis, villosa, violacea, viridula, vitreus.

Stratiomys: chamaeleon, pallipes, singularius, spatula, strigata, tenebricus.

striatus: lineata, striata, strigatus: lineata.

Strongygaster: lingens.

stygia: laemica.

stylata: iacobeae, jacobeae.

Subhylemyia: longula, parvula.

subventa: subventus.

Suillia: tuberis.

superbiens: fulvus, mussitans.

sylvana: sylvanus. sylvarum: longisco.

Sylvicola: bilineata, cinctus, fuscata,

nigricans, punctatus, succincta. syngenesiae: singenesiae.

Syntormon: pallipes. Syritta: pipiens, pipines.

Syrphidae: abdominalis, ablectus,

adunata, aenea, agilitas, agrorum, albimana, alternata, americana, annexa, annulatus, anteaimbulo, anteambulo, aphidivora, apiformis, apivora, arbustorum, arcuata, aruorum, arvorum, asiliformis, ater, atropos, balteata, bardus, bicincta, bicinctata, bifasciata, bipunctata, blandus, bombylans, bombyliformis, brunnea, caemeteriorum, calcarata, callosus, cannabina, cautus, cemiteriorum, chrysorrhaea, chrysozonias, cincta, cinctus, cingulatus, citreofasciata, citrofasciata, clauda, clauipes, coalescens, comtus, confusus, conica, conopsea, conopsoides, consisto, contracta, corollae, coryden, corydon, crabroniformis, crassa, crassipes, cruentata, cryptarum, curvipes, cyanea, cylindracea, cylindricus, dentipes, depressa, devia, dexter, diophthalma, dirae, dispar, dizonias, elegans, elephantopus, eligans, elongata, ericetorum, errans, erratica, esuriens, exinanita, facultas, fallax, fasciata, fasciolata, femorata, festiva, flavescens, flavicornis, florea,

formosus, frutetorum, fucatus. fuciformis, fulva, fulvus, funebres. funebris, funesta, funibres, fuscus, fusiformis, glaucia, granditarsa, hirsutissima, horticola, hortorum, hortulana, illustratus, imbellis, inaequalis, inanis, inflata, interpunctus, interrupta, interruptus, intersecta, intricaria, intricata, invisito, jamaicensis, laeta, lappona, laternaria, leneatus, leucocephala, libatrix, lineata, lineatus, lineolae, lineolata, longipes, longisco, lucida, lucorum, lugubris, lunata, lunula, luteola, lyra, macrocephala, macrophthalma, maritima, melancholica, melanius, melanochrysa, melanopyrrha, mellina, menthastri, merulina, metallina, meticulosa, micans, moesta, molio, molitus, monoculus, murina, murorum, mussitans, mutabilis, naevia, nasatus, natans, navus, nectareus, nectarina, nemorum, nigra, nigrana, nigrita, nitens, noctiluca, nosatus, nova, obesa, obfuscata, ochroleuca, ocymi, oestracea, pacifica, palustris, paralleli, parallelus, parralleli, parrallelus, parrelleli, pedissequus, pellucens, pendula, perexilis, perexillis, personatus, pigra, pinastri, pinguis, pipiens, pipines, plumata, plumosa, podagrica, politus, porcina, potens, prasina, pratorum, profuges, profugus, pulla, punctata, pusilla, pyrastri, pyrorum, quadrilineatus, quinquelineata, quinquestriata, ribesii, rosae, rosarum, rostrata, rubiginea, rubiginosa, ruficaudis, ruficornis, rutilo, salviae, scitule, scitulus, scitus, scripta, seelandica, segetum, segnis, semiluctifera, semirufa, semulater, semulator, sepulchralis, silentis, simulator, sinensis, speculifera, subtomentosa, surinamensis, sylvarum, tarditas, tartidus, tenax, tenur, tetragona,

thymastri, timeo, tranquebarica, transfuga, trelineata, trifasciata, trileniata, trilenva, trilineata, trilineatus, tristis, tristor, univalvis, vacua, valentina, valga, versicolor, versicolorata, vesiculosa, vespaesimilis, vespiformis, viduata, virginiensis, viridescens, vivax, vorax, zonalis, zonaria, zonatus.

Syrphus: blandus, ribesii, vacua. Tabanidae: pellita.

Tachina: erucarum, fera, grossa, neustriae, reccumbo, rerumbo, tessella, tessellata.

Tachinidae: acromion, affinis, agilis, albifrons, aldrichi, altratus, anceps, angusticornis, argyrostoma, aterrima, atratus, atrifrons, aurifrons, ausus, bifasciata, bohemica, brachyptera, brassicaria, brevis, canina, canus, capitata, carbonaria, carinifrons, cerasina, cerinus, chrysostoma, cincta, cingulata, compressa, confluo, conspersus, continua, convenio, convolo, costalis, costata, crassa, crassicornis, crassipennis, crassiseta, cylindrica, deceptoria, demano, diaphana, dilecta, dimano, dimidiata, erinaceus, erucarum, esuriens, evonymellae, fasciata, fera, ferina, flaviceps, formosa, gastrodes, geniculata, germanica, globosa, grisescens, grossa, hartigii, helluo, hemiptera, hemisphaerica, hirsuta, hirta, hystrix, iliaca, interpunctionis, interventus, investigator, larvarum, larvincola, lateralis, leucozona, libatrix, lingens, liris, longipes, lucozona, lupina, lurida, major larvarum, marmorata, metallina, metus, minor larvarum, mirabilis, moesta, monachae, nebulosa, neustriae, nigricornis, nigrina, nigripes, obsidianus, ochracea, parasitica, pavida, pennipes, petiolata, phalaenarum, pica, pilosa, pinguis, piniperdae, pinivorae, plebeja, praeceps, procedo, processioneae,

promano, promans, provenio, pubiceps, punctata, puparum, quadripustulata, reccumbo, recedans, redambulo, redeans, redians, regalis, repens, rerumbo, resinellae, retusa, rotundata, ruficrus, rufiventris, rufomaculata, rustica, rutilans, rutillus, sensifera, sericea, sinuata, solivagus, splendida, subcoleoptrata, tachinoides, taeniata, temula, tessella, tessellata, torvis, torvus, tremula, tricincta, tristis, urbanus, vacua, valida, varia, venatoria, villica, volets, volvulus.

Tachinidae?: nigripes, rustica. Tachydromia: arrogans. Tachypeza: cursoria. Taeniaptera: annulata, lasciua.

taeniatum: gibba. tasmaniae: extrema.

Temnostoma: vespaesimilis, vespiformis. tempestiva: albipennis, carnifex, cuprea, curvinervis, minima, nana, phasiaeformis, pusilla, stimulans, unisetula, violacea.

temula: obsidianus, tremula. tenax: apiformis, porcina. Tephritidae: amica, arctii, arcuata,

arnicae, artemisiae, caesio, cardui, centaureae, cerasi, cinerea, cinereus, cinerius, connexa, cornuta, coryli, crax, crux, dauci, discoidea, erythrocephala, falcata, ferruginea, flauescens, florescentiae, fucata, furcata, haemorrhoidalis, helianthi, heraclei, heraclii, hyoscyami, iacobeae, jacobeae, lappae, leontodontis, limatus, lincensis, linzensis, longicornis, lychnidis, miliaria, oleae, onopordinis, parietina, perelegand, perelegans, permundus, placida, poeciloptera, punctata, purmundus, radiata, ruficauda, scabiosae, serratula, serratulae, solstitialis, sonchi, stellata, stictica, stylata, subcutanea, tussilaginis, vecors, vinulus, viridescens, vittata.

Tephritis: arnicae, cinerea, heraclei, hyoscyami, leontodontis.

Terellia: cornuta, lappae, ruficauda, serratula, serratulae, tussilaginis. terraenovae: groenlandica, orior.

terraereginae: hilli. tessariae: fucata, furcata.

tessella: tessellata. testaceus: elongata.

Tetanocera: alata, elata, elater.

Thelaira: lateralis, leucozona, lucozona, nigrina, nigripes, solivagus.

Themira: conssencis, cossenico, fimeti, putris.

Theresia: valida.

Thereva: fasciata, hirta, lugubris, nobilis, nobilitata, plebeja.

Therevidae: anilis, ardea, bilineata, fasciata, flavipes, hirta, lugubris, nobilis, nobilitata, ochropus, plebeja.

Thoracites: abdominalis.

Thricops: atra, diaphana, hyalinata, variabilis.

Thyreophora: cynophila.

Thyridanthrax: nigrita. Thyrsocnema: striata.

tigrina: notata, rapax.

timorensis: benedicta, intrahens, obtrusa.

totliana: fabricii, fasciata.

Toxomerus: dispar.

Trachydromia: cimecoides, cimicoides.

transfugus: transfuga. Tricharaea: occidua.

Trichodura: anceps.

Trichopoda: pennipes.

trilineata: graeca, hypoleon.

tringaria: vanella.

tringarius: tringaria.

Trixa: conspersus.

Tromodesiopsis: atrifrons.

Tropidia: scitus.

Trupanea: radiata, stellata.

Trypeta: artemisiae, florescentiae, perelegand, perelegans.

Trypetoptera: hieracii, punctulata.

tuguriorum: extranea.

uliginosus: uliginosa.

unguicornis: flavifrons, varicus, varieus.

ungulata: squamata, squamifera. ungulatus: ungulata.

UNKNOWN: abrupta, adiaphora, adspersus, aestiva, aestivationis, aestuans, agilis, albomicans, allii. alterabilis, ambulans, annulata, aphidioides, argentata, argentea, aselliformis, atra, aurata, bibosa, bicolor, bilineata, bimaculata, brunnea, buccata, buphthalmi, capito, caracteristica, carinata, castanea, caudata, cerasi, chrysocephala, chrysostoma, cineraria, cinerascens, cinerea, cingulata, clandestina, clauata, clavicornis, claviformis, claviventris, concinna, conferta, conica, contigua, costata, crassipes, cruciata, cuprea, cyanophthalma, cylindrica, depressa, despecta, divaricata, doclea, doliata, duplicata, elongata, erratica, erythrocephala, fallax, familiaris, fervida, fimetorum, flauicans, flavescens, flavicans, flavipes, fulvipes, fungorum, fusca, fuscipes, galeata, geographica, gibba, gibbosa, gigantea, glaucoptera, grisea, guttata, helenii, helvola, hemipterus, hirticollis, hortensis, hydrophila, hydropica, ichneumonoides, larvata, lateritia, latipes, latro, leprae, leuconyx, leucophaeus, leucopis, leucoptera, leucosticta, libatrix, liturata, longipes, luctuosa, lutea, macrocephala, mactans, maculata, maculatus, marginalis, marginella, marmorata, melanochrysa, melanura, mesoleuca, minimus, minutissima, muraria, nigra, nigripilis, nivalis, nobilis, notata, novemmaculata, novempunctata, ochroptera, orbiculata, pallida, pennipes, personata, pertinax, picata, picea, piceae, plombea, plumbea, potentillae, praedo, praeusta, prodromaria, psyllia, pulicaria, pullata, punctata, punctifera, putrida, putris, quadrata, quadricolor,

quadrifasciata, quadrilineata, quadrimaculata, quinquefasciata, quinquepunctata, resinosa, reticulata, rubripes, rufa, ruficapilla, rufipes, rufiventris, sacalis, scolopacina, secalis, segmentaria, semiflava, sericea, setaria, seticornis, setosa, smaragdina, solstitialis, sordida, spinifera, squalida, stellata, strigosa, stuans, subcutanea, subulata, suecica, syrphus, teres, terrestris, tessellata, tibialis, tipulaea, tipuliformis, topiaria, tricolor, tridens, trigrammica, trimaculata, trinervis, tripunctata, tristis, truncata, tuberculata, turcica, varia, velox, venosa, versicolor, versipellis, vinculata, violacea, virens, viridana, vitrata, vivipara.

urbana: rustica.

Urophora: arctii, cardui, dauci, iacobeae, Xanthandrus: comtus. jacobeae, placida, solstitialis, stylata.

ursina?: argyrostoma. vagabunda: varians.

vagans: strigosa, volito.

valgus: valga. valida: validus.

ventrosa: kasauliensis, nigrithorax,

pungoana, xanthomela.

Vermileo: vermileo. Vermileonidae: vermileo.

versicolor: hartigii, versicolorata.

vertiginosa: marmorata.

vesiculosum: vesiculosa.

vespertina: nigrita.

vespiformis: vespaesimilis.

vespillo: ruficornis, virescens. vetustissima: angustifrons, fieldi,

latifrons, nigricruris, prisca, pumila.

viarum: pusilla. viatica: fulvicornis.

vibrans: urticae.

vicana: decolor, mantes, mantos, vicanus.

vicina: aucta, carnivora, erythrocephala, scutellata, spitzbergensis, thuscia.

Vidalia: cornuta.

Villa: troglodyta.

vinetorum: surinamensis.

violacea: infixa.

viredaurea: munda, reflectens, viridaurea. viridicyanea: anthracina.

viridula: jejuna.

Volucella: annulatus, apivora,

bombylans, hirsutissima, inanis, inflata, melanopyrrha, micans, pellucens, plumata, plumosa, trifasciata, valentina, zonaria.

volvulus: cylindrica.

vomitoria: affinis, carnaria, coerulea, minimus, obscoena.

vulgaris: agilis.

vulpina?: investigator.

Winthemia: pinguis, quadripustulata.

Xanthogramma: anteaimbulo, anteambulo, citreofasciata, citrofasciata, festiva, laeta,

pedissequus, vespiformis.

xanthomelaena: albomaculata, dorsomaculata, irwinrossi, lothari, rufiventris, setigera, xanthomelas.

Xenocalliphora: hortona, icela.

Xylophagidae: australis, cincta, crucis, ferruginea, grandis, olens, testacea.

Xylophagus: cincta.

Xylota: contracta, fucatus, longisco,

maritima, melanochrysa, pigra, segnis, semulater, semulator,

simulator, sylvarum.

Xyphosia: arcuata, miliaria.

Zaphne: ambigua.

Zenillia: libatrix, ochracea.

zoe: perelegand, perelegans.

zonaria: valentina.

zonata: rufipes, sinensis, zonalis,

zonatus.

# Summary of nomenclatural changes

Names are arranged by family and alphabetically by genus and species within family. Lectotype entries and junior synonyms are listed under the original combination of the species group name, others are under the present combination.

#### New names

Calliphoridae: Protocalliphora rognesi Thompson & Pont = chrysorrhoea Meigen 1826, not Scopoli 1763; Muscidae: Musca mallochi Thompson & Pont = squamata Malloch 1934, not Müller 1764; Psilidae: Chamaepsila hennigi Thompson & Pont = rosae Fabricius 1794, not DeGeer 1776; Sarcophagidae: Anapunophyto lopesi Thompson & Pont = pusilla Macquart 1848, not Gmelin 1790.

### New lectotype designations

Calliphoridae: Musca laemica Walker; Syrphidae: Musca pinastri De Geer, Musca pyrorum Schrank.

# Changes in taxonomic status (New synonymy)

Anisopodidae: Musca nigricans de Villers = Sylvicola fuscatus (Fabricius); Bombyliidae: Musca hirsuta de Villers = Hemipenthes maurus (Linnaeus); Calliphoridae: Musca laemica Walker = Calliphora stygia (Fabricius), Musca melanoptera Fallén = Morinia doronici (Scopoli), Musca bicolor Walker = Phormia regina Meigen, Musca sordida Zetterstedt = Protocalliphora rognesi Thompson & Pont, Musca felix Walker = Chrysomya albiceps (Wiedemann), Musca virens Wiedemann = Cosmina limbipennis (Macquart), Musca quadrilineata Fabricius = Eumesembrinella flavipennis (Macquart), Musca segmentaria Fabricius = Hemilucilia nubipennis (Rondani), Musca gentilis Meigen = Melinda gentilis (Robineau-Desvoidy); Chloropidae: Musca nigra Linnaeus = Oscinella frit (Linnaeus), Musca pigra Geoffroy = Meromyza saltatrix Linnaeus, Musca pumilionis Banks = Chlorops pumilionis (Bjerkander), Musca saltatrix Geoffroy = Chlorops pumilionis (Bjerkander); Curtonotidae: Musca gibba Fabricius = Curtonotum taeniatum Hendel; Dolichopodidae: Musca squamata Müller = Dolichopus ungulatus (Linnaeus), Musca ciliata Müller = Poecilobothrus nobilitatus (Linnaeus), Musca nigripes Fabricius = Chrysotus laesus (Wiedemann); Keroplatidae: Tipula lineata Fabricius = Cerotelion striatus (Gmelin); Micropezidae: Hoplocheiloma fabricii Steyskal = Hoplocheiloma totliana (Gmelin); Otitidae: Musca hortulana Rossi = Ceroxys hyalinata (Panzer), Musca graminum Fabricius 1794 = Dorycera aquatica (Geoffroy), Musca aenea Fabricius = Physiphora clausa (Macquart); Phoridae: Bibio florea Fabricius = Diplonevra florescens (Turton); Sarcophagidae: Musca cinerea Fabricius = Leucomyia alba (Schiner); Sciomyzidae: Musca cribrata de Villers = Coremacera marginata (Fabricius); Sepsidae: Musca spondylii Schrank 1837 = Saltella sphondylii (Schrank 1803); Stratiomyidae: Musca sellata Fuesslin = Clitellaria ephippium (Fabricius), Musca elongata Fabricius = Ptecticus posticus (Wiedemann); Syrphidae: Musca apiformis Geoffroy = Eristalis tenax (Linnaeus), Musca balteata De Geer = Episyrphus cannabina (Scopoli), Musca bipunctata Müller = Chrysotoxum arcuatum (Linnaeus), Musca bombyliformis Geoffroy = Merodon equestris (Fabricius), Musca chrysozonias Gmelin = Chrysotoxum fasciatum(Müller), Musca consisto Harris = Dasysyrphus pinastri (De Geer), Musca contracta Geffroy = Xylota segnis (Linnaeus), Musca depressa Swederus = Leucozona glaucia (Linnaeus), Musca elegans de Villers = Episyrphus cannabina (Scopoli), Musca festiva Geoffroy = Chrysotoxum arcuatum (Linnaeus), Musca fulva Gmelin = Cheilosia illustrata (Harris), Musca hirsutissima de Razoumowsky = Volucella bombylans (Linnaeus), Musca imbellis Harris = Chrysotoxum arcuatum (Linnaeus), Musca inaequalis Geoffroy = Episyrphus cannabina (Scopoli), Musca leucocephala Gmelin = Eristalinus aeneus (Scopoli), Musca lineata Geoffroy = Eumerus strigatus (Fallén), Musca lineolae Harris = Eristalis interrupta (Poda), Musca lineolata Gmelin = Chrysogaster cemiteriorum (Linnaeus), Musca longipes Thunberg = Chalcosyrphus femoratus (Linnaeus), Musca lunula de Villers = Eristalis pertinax (Scopoli), Musca luteola Gmelin = Myolepta dubia (Fabricius), Musca maritima Scopoli = Xylota segnis (Linnaeus), Musca melanochrysa Gmelin = Xylota segnis (Linnaeus), Musca naevia Gmelin = Milesia semiluctifera (de Villers), Musca nectarina Gmelin = Episyrphus cannabina (Scopoli), Musca pyrorum Schrank = Dasysyrphus pinastri (De Geer), Musca vespiformis Geoffroy = Xanthogramma festiva (Linnaeus).

#### New and revised combinations

Bibionidae: Bibio bidentatus (de Villers), Dilophus novemmaculatus (de Villers); Calliphoridae: Isomyia selecta (Walker), Onesia hederacea (Geoffroy), Phumosia dioclea (Walker), Pollenia umbrifera (Walker); Chloropidae: Chlorops pulchella (Müller), C. quadristrigata (Donovan), C. lepidus (Harris); Empididae: Hilara globulipes (Geoffroy); Heleomyzidae: Suillia tuberis (Vallot); Keroplatidae: Macrocera longicornis (Fabricius), M. macroceras (Gmelin); Muscidae: Morellia nigricosta Hough; Otitidae: Dorycera aquatica (Geoffroy); Stratiomyidae: Ptecticus japonica (Thunberg); Sarcophagidae: Agria affinis (Fallén); Syrphidae: Cheilosia aenea Scopoli.

#### New status

Calliphoridae: Morinia doronici (Scopoli); Curtonotidae: Curtonotum taeniatum Hendel; Dolichopodidae: Chrysotus laesus (Wiedemann); Keroplatidae: Cerotelion striatus (Gmelin); Micropezidae: Hoplocheiloma totliana (Gmelin); Otitidae: Ceroxys hyalinata (Panzer), Melieria gangraenosa (Panzer), Otites elegans (Latreille), Physiphora clausa (Fabricius); Phoridae: Diplonevra florescens (Turton); Sarcophagidae: Leucomyia alba (Schiner); Stratiomyidae: Ptecticus posticus Wiedemann; Syrphidae: Baccha perexilis Harris, Dasysyrphus pinastri (De Geer), Episyrphus cannabina (Scopoli), Eristalis lineatus (Harris), Eristalis lyra (Harris), Ischiodon nigra (Forskål), Psarus coalescens (Geoffroy); Tachinidae: Tachina tessella (Turton), Thelaira nigrina (Fallén), Zenillia fulva (Fallén).

# Overlooked names (names not in recent Diptera catalogs)

Anisopodidae: nigricans de Villers; Athericidae: atherix Donovan; Bibionidae: bidentata de Villers, ciliata de Villers, novemmaculata de Villers, tuberculata de Villers; Calliphoridae: bicolor Walker, caerulea Brullé, caesarina Scopoli, caesarion Scharfenberg, chalybaea Gravenhorst, dioclea Walker, dolens Zetterstedt, felix Walker, flavicans Doleschall, fulvimaculata Manuel, ionia Meigen, micans Fabricius, minimus Harris, polisma Walker, remigro Harris, reviso Harris, selecta Walker, suffusa Walker, umbrifera Walker, violacea Fabricius, virens Wiedemann, viridicaerulea De Geer; Chamaemyiidae: gibbosa De Geer; Chloropidae: erro Harris, nigra Linnaeus, pigra Geoffroy, pulchella Müller, pumilionis Banks, saltatrix Geoffroy; Coelopidae: relictus Harris, simulator Harris; Dolichopodidae: amicula Harris, caudex Harris, ciliata Müller, festiva Donovan, gibba Müller, hebes Harris, ingruo Harris, sannio Harris, semiargentata Donovan, semiargentea Turton, squamata Müller, squamifera Müller; Dryomyzidae; mellinus Harris; Empididae: globulipes Geoffroy; Fanniidae: minor Harris; Heleomyzidae: avarus Harris, dejectus Harris, sandaracha Harris; Keroplatidae: longicornis Fabricius, macroceras Gmelin: Lauxaniidae: caeruleophthalmica Scopoli, mulsus Harris; Lonchaeidae: vernicina Scopoli; Micropezidae: ephippium Walckenaer, pedo Harris, peragro Harris, totliana Gmelin; Opomyzidae: galpinus Harris; Otitidae: alceae Preyssler, aquatica Geoffroy, myennis Coquebert, porca Latreille; Phaeomyiidae: nigripennis Fabricius; Pallopteridae: minutus Harris; Phoridae: florescens Turton; Piophilidae; ornithovora Scopoli; Pipunculidae; cephalotes Bosc; Platystomatidae: naevosus Harris, singenesiae Manuel, variolosa Schrank: Psilidae: histrionica Fabricius, longerro Harris, luteus Harris, percussus Harris, rufa De Geer, vagus Harris; Rhagionidae: cingulatus Donovan, norwegica Gmelin; Sarcophagidae: frontalis Latreille, haemorrhoa Gravenhorst, labiata Fabricius, leucocephala de Villers, martia Scopoli, moneta Walker, nigrita Scopoli, prolabor Harris, pusilla Macquart, reverto Harris,

sexpunctata Fabricius, taenionota Wiedemann, valens Harris; Scathophagidae: abbreviata Gravenhorst, exilis Harris, lucophaeus Harris, paganus Harris; Scatopsidae: nectarivora Turton; Scenopinidae: tarda Linnaeus; Sciaridae: maura Turton; Sciomyzidae: cribrata de Villers, delicate Harris, oratoria Turton, tener Harris, varicus Harris; Sepsidae: elongata Müller, palpator Harris, spondylii Schrank; Stratiomyidae: aequinoctialis Linnaeus, japonica Thunberg, melanopis Gmelin, minor Turton, minutior Turton, nigricans Gmelin, sellata Fuesslin; Syrphidae: apiformis Geoffroy, bombyliformis Geoffroy, chrysorrhaea Scopoli, contracta Geoffroy, depressa Swederus, elegans de Villers, fusiformis Turton, hirsutissima de Razumowsky, hortulana Scopoli, inaequalis Geoffroy, interrupta Geoffroy, intricata Turton, lineata Geoffroy,longipes Thunberg, merulina Scopoli, murina Schrank, nectarina Gmelin, nigra Forskål, pulla Gmelin, univalvis Turton, versicolorata Turton, vespaesimilis Barbut; Therevidae: ochropus Turton; Xylophagidae: olens Fuesslin.

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# References Cited.

Ackland, D. M. & E. Taylor

1972 Notes on the Verrall-Collin collection of Diptera in the Hope Department of Entomology, University Museum, Oxford. *Ent. mon. Mag.* 108: 12-15. (27 September)

Aldrich, J. M.

1929 Further studies of types of American muscoid flies in the collection of the Vienna Natural History Museum. *Proc. U. S. natl Mus.* 74(19), 34 pp.

Aldrovandus, U.

1602 De animalibvs insectis libri septem cvm singvlorvm iconibvs ad viuum expressis. [10+] 767 [+43] pp. Bellagamba, Bonona. [=Bologna]

Allioni, C.

1766 Manipulus Insectorum Taurinensium. *Mélanges Soc. R. Turin* 3: 185-198.

Am Stein — see Stein, J. R. Am

Ander, K.

1952 Mitteilung über die im Entomologischen Museum zu Lund befindlichen Typen. Opusc. ent. 17: 77-79. (12 March)

Andersen, S.

1982 Revision of European species of *Siphona* Meigen (Diptera: Tachinidae. *Ent. Scand.* 13: 149-172. (5 July)

Anker, J.

1950 Otto Friderich Müller's Zoologia Danica. *Libr. Res. Monogr., Copenhagen* 1, xiv + 108 pp. (21 June)

Arntfield, P. W.

1975 A revision of *Graphomya* Robineau-Desvoidy (Diptera: Muscidae) from North America. *Canad. Ent.* 107: 257-302. (27 February)

Austen, E. E.

1909 New genera and species of blood-sucking Muscidae from the Ethiopian and Oriental Regions, in the British Museum (Natural History). *Ann. Mag. nat. Hist.* (8) 3: 285-299. (March)

1910 A new Indian species of Musca. Ann. Mag. nat. Hist. (8) 5: 114-117. (January)

Avelin, G. E. — see Linnaeus 1764b

Awati, P. R.

1915 Studies in flies. I. Chaetotaxy and pilotaxy of Muscidae and range of their variability in the same species. *Indian J. med. Res.* 3: 135-148, pls 12-14. (July)

1916a Studies in flies. - II. Contributions to the study of specific differences in the genus *Musca*. 1. - Genitalia. *Indian J. med. Res.* 3: 510-529, 2 tables, pls 32-50. (January)

- 1916b Studies in flies. Contributions to the study of specific differences in the genus *Musca*. 2. Structures other than genitalia. *Indian J. Med. Res.* 4: 123-139. (July)
- 1917 Studies in flies. III. Classification of the genus *Musca* and descriptions of the Indian species. *Indian J. med. Res.* 5: 160-191, pls 20-29. (July)
- 1918 A new larviparous *Philaematomyia (Philaematomyia indica*, N. Sp.). *Indian J. med. Res.* 5: 529-539, pls 50-55. (January)
- 1920 A note on the genitalia of Portschinsky's species M. corvina (vivipara) and M. corvina (ovipara). Indian J. med. Res. 8: 89-92, 2 tables, pl. 13. (July)

#### Baccetti, B.

- 1962 Pietro Rossi, Naturalista Toscano del '700. Frustula ent. 5(3), 30 pp. Bächli, G.
- 1982 On the type material of Palearctic species of Drosophilidae (Diptera). *Beitr. Ent., Berlin* 32: 289-301.
- 1984 Die Drosophiliden-Typen der Dipterensammlung des Zoologischen Museums in Berlin. *Mitt. zool. Mus. Berlin* 60; 229-261.
- 1990 Type specimens of Drosophilidae (Diptera) described by Linnaeus, Fallén, Wahlberg and Zetterstedt. *Rev. suisse Zool.* 97: 843-849.

Baeckner, M. A. - see Linnaeus 1764c

### Banks, J.

1791 On the *Musca pumilionis*. Ann. Agric. 16(2): 176-177, 1 pl. **Barbut**, A.

1781 Les Genres des Insectes de Linné; constatés par divers échantillons d'Insectes d'Angleterre, copiés d'Après Nature. xx + 371 [+ 20] pp., 22 pls. J. Sewell, London. (after 9 February)

[With a second engraved English pictorial title page: The genera insectorum of Linnaeus, exemplified by various specimens of English insects drawn from nature. Both title pages state that the work was published by the author. The french title page gives Dixwell as the printer and J. Sewell as publisher.]

## Baumgartner, D. L. & B. Greenberg

1984 The genus *Chrysomya* (Diptera: Calliphoridae) in the New World. J. med. Ent., Honolulu 21: 105-113.

## Beavis, I. C.

1988 Insects and other invertebrates in classical antiquity. xv + 269 pp. University of Exeter, Exeter.

# Bechstein, J. M. & G. L. Scharfenberg

1805 Vollständige Naturgeschichte der schädlichen Forstinsekten. Ein Handbuch für Forstmänner, Cameralisten und Oekonomen. Dritte und letzte Abtheilung. Nebst dem Anhang von den nützlichen Forstinsekten. [Vol. 3], pp. 605-1042, pls. 10-13. C. F. E. Richter, Leipzig.

#### Becker, T.

1902- Aegyptischen Dipteren. *Mitt. zool. Mus. Berlin* 2: 1-66 (1902, 12 1903 August); 67-195 (1903, 23 September)

#### Beier, M.

1973 The early naturalists and anatomists during the Renaissance and seventeenth century. Pp. 81-94. In Smith, R. F., T. E. Mittler & C. N. Smith [eds], History of Entomology, vii + 517 pp. Annual Reviews Inc., Palo Alto, California,

#### Bezzi, M.

- 1892 Di alcuni ditteri raccolti nel paese dei Somali dall'ingegnere L. Bricchetti-Robecchi. Ann. Mus. Civ. Stor. Nat. Genova 32: 181-196.
- 1906 Noch einige neue Namen für Dipterengattungen. Ztschr. System. Hymenopt. Dipt. 6: 49-55. (1 January)
- 1907 Nomenklatorisches über Dipteren. II. Wien. ent. Ztg 26: 292-296. (20 August)
- 1908a Nomenklatorisches über Dipteren, III. Wien, ent. Ztg 27: 74-84, (20 February)
- 1908b Nomenklatorisches über Dipteren. IV. Wien. ent. Ztg 27: 291-295. (1 December)
- 1908c Ditteri eritrei raccolti dal Dott, Andreini e dal Prof. Tellini, Parte seconda. Diptera cyclorrhapha. Bull. Soc. Ent. Ital. 39: 3-199 (1907). (9 November)
- 1911 Miodarii superiori raccolti dal signor C. W. Howard nell'Africa australe orientale. Boll. Lab. Zool. R. Scuola Agric. Portici 6: 45-104 [The separate is dated as published on 14 November 1911 (see Smith et alia 1980: 917)]
- 1921 Musca inferior (Stein), type of a new genus of philaematomyine flies (Diptera). Ann. Trop. Med. Parasit. 14: 333-340. (8 February)
- 1923 Les mâles de Musca albina Wied, et de Musca lucidula Loew (Dipt.). Bull. Soc. r. ent. Égypte 7 [1922-1923]: 108-118.

## Bezzi, M. & P. Stein

1907 Cyclorrapha Aschiza. Cyclorrapha Schizophora: Schizometopa. Pp. 1-189, 190-749. In Becker, T., M. Bezzi, K. Kertész & P. Stein (eds.), Katalog der paläarktischen Dipteren, Vol. 3, 828 pp. Budapest. (1 December)

## Bickel, D. J.

The Australian Sciapodinae (Diptera: Dolichopodidae), with a review In Press of the Oriental and Australasian faunas, and a world conspectus of the subfamily. Rec. Australian Mus. Suppl.

Bigot, J. M. F.

1887 [Diagnoses abrégées de quelques Diptères nouveaux, provenant de l'Amérique du nord, dont les descriptions détaillées seront publiées ultérieurement, et qui tous appartiennent à sa collection]. Bull. Bimens. Soc. ent. Fr. 1887 (21): clxxii-clxxiv. (19 November)

[Due to an error in the printing of Bulletin No. 21, the pagination is different from the reprinted version in

- 1888a Diptères nouveaux ou peu connus. Muscidi (J.B.) *Bull. Soc. Zool. France* 12: 581-617 (1887). (15 January)
- 1888b [Diagnoses abrégées de quelques Diptères nouveaux, provenant de l'Amérique du nord, dont les descriptions détaillées seront publiées ultérieurement, et qui tous appartiennent sa collection]. *Bull. Soc. ent. Fr.* (6) 7: clxxx-clxxxii. (11 April)

#### Bjerkander, C.

- 1777 Rön Om Rot-masken. K. Vetenskapsakad. Handl. 38: 29-43. [A German synopsis of this article is in Bjerkander 1783.]
- 1778 Rag-Dvergs Masken. K. Vetenskapsakad. Handl. 39: 240-241.
- 1780 Beskrifning pa tvänne slags Maskar, som äro Larver af härtils okände Insecter och funnits pa Ror-Kal *Napo-Brassica*. *K. Vetenskapsakad*. *Nya Handl*. 1: 194-196.
- 1781 Hafre Masken. K. Vetenskapsakad. Nya Handl. 2: 171-172.
- 1783 Über das Wurzelinsekt. Lichtenberg, Mag. neueste Phys. Naturgesch., Gotha 2: 101-104.
- 1793 *Musca subcutanea*, eller en ny och obeskrefven fluga uti korn-bladen. *K. Vetenskapsakad. Nya Handl.* 14: 57-60, pl. 2.

### Blackwelder, R. E.

1947 The dates and editions of Curtis' British Entomology. *Smithson. Misc. Coll.* 107 (5), 27 pp., 4 pl. (12 June)

### Blanchard, E.

1840 Histoire Naturelle des Insectes. Orthoptères, Nevroptères, Hémiptères, Lépidoptères et Diptères. 672 pp., 71 pls, Duméril, Paris. (December)

# Blankaart, S.

1688 Schou-burg der rupsen, wormen, ma'den, en vliegende dierkens daar uit voortkomende. 4 + 232 [+ 2] pp., 16 coloured pls. J. ten Hoorn, Amsterdam.

## Bloch, M. E.

1776 Beitrag zur Naturgeschichte des Kopals. *Beschäft. Berlin. Gesellsch. naturf. Fr.* 2: 91-224, pls. III-V.

# Bodenheimer, F. S.

- 1928 Materialien zur Geschichte der Entomologie bis Linné. Band I. x + 498 pp., 24 pls. Junk, Berlin.
- 1929 *Materialien zur Geschichte der Entomologie bis Linné*. Band II. vi + 486 pp., 4 pls. Junk, Berlin.

## Boisduval, J. B. A. D. de

1835 Faune entomologique de l'Océan Pacifique, avec l'illustration des Insectes nouveaux recueillis pendant le voyage. Deuxième Partie. Coléoptères et autres ordres. vii + 716 pp., plates 6-12. In his Voyage de découvertes de l'Astrolabe, exécuté par ordre du Roi, pendant les années 1826-1827-1828-1829, sous le commandement de M. J. Dumont d'Urville. J. Tastu, Paris. (9 May)

Bosc d'Antic, L. A. G.

1792 Description de deux Mouches. Bull. Sci. Soc. Philom., Paris 1: 18.

Bouché, P. F.

1834 Naturgeschichte der Insekten, besonders in Hinsicht ihrer ersten Zustände als Larven und Puppen. Erste Lieferung vi + 216 pp., 10 pls. Nicolai, Berlin.

Brauer, F. M.

1899 Beiträge zur Kenntnis der Muscaria schizometopa. Bemerkungen zu den Originalexemplaren der von Bigot, Macquart und Robineau-Desvoidy beschriebenen Muscaria schizometopa aus der Sammlung des Herrn G. H. Verrall. Dritte Folge. *Sber. Akad. Wiss. Wien* 108, Abt. 1: 495-529.

Brauer, F. M. & J. von Bergenstamm

Die Zweiflügler des Kaiserlichen Museums zu Wien. IV. Vorarbeiten zu einer Monographie der Muscaria Schizometopa (exclusive Anthomyidae). Pars I. *Denkschr. Akad. Wiss.*, *Wien*, 56: 69-180, 11 pls. (March)

1891 Die Zweiflügler des Kaiserlichen Museums zu Wien. V. Vorarbeiten zu einer Monographie der Muscaria Schizometopa (exclusive Anthomyidae). Pars II. *Denkschr. Akad. Wiss.*, Wien, 58: 305-446.

1893 Die Zweiflügler des Kaiserlichen Museums zu Wien. VI. Vorarbeiten zu einer Monographie der Muscaria Schizometopa (exclusive Anthomyidae). Pars III. *Denkschr. Akad. Wiss.*, Wien, 60: 89-240.

Brullé, G. A.

1832 IV<sup>e</sup> Classe. Insectes. Pp. 64-395. *In* Bory de Saint-Vincent (ed.), *Expédition scientifique de Morée*. Section des sciences physiques 3(1) (Zool. 2), 400 pp. Levrault, Paris & Strasbourg.

Brunetti, E.

1910 Revision of the Oriental bloodsucking Muscidae (Stomoxinae, *Philaematomyia* Aust., and *Pristirhynchomyia*, gen. nov.). *Rec. Indian Mus.* 4(4): 59-93, pls. 7-8. (5 July)

Brünnich, M. T.

1764 Entomologia, sistens insectorum tabulas systematicas, cum introductione et iconibus. Insektlaere, indeholdende Insekternes systematiske tavler, samt indledning og figurer. [7+] 88 pp., 1 pl. Godiche, Hafniae, Kiøbenhaven [= Copenhagen].

Bryk, F.

1949 De Geers Insektensammlung eine Fundgrube von unbekannten Linnéschen Typen! *Opusc. Ent.* 14: 77-80.

Burger, J. F. & F. C. Thompson

1981 The *Tabanus striatus* complex (Diptera; Tabanidae): A revision of some Oriental horse fly vectors of surra. *Proc. ent. Soc. Washington* 83: 339-358. (30 August)

#### Cederhielm, I.

1798 Favnae Ingricae Prodromvs exhibens methodicam descriptionem Insectorvm agri Petropolensis praemissa Mammalivm, Avivm, Amphibiorvm et Piscivm envmeratione. xviii + 348 pp., 3 pls. Iohann. Freid. Hartknoch, Lipsiae [=Leipzig]. [Name given by Hagen as Cederhjelm, J.]

#### Chalmers-Hunt, J. M.

1976a Entomological sales. Pp. 3-14. In his Natural History auctions. 1700-1972. A register of sales in the British Isles. xii + 189 pp. Sotheby Parke Bernet, London.

### Chalmers-Hunt, J. M.

1976b The register of natural history sales. Pp. 53-189. In his Natural History auctions. 1700-1972. A register of sales in the British Isles, xii + 189 pp. Sotheby Parke Bernet, London.

#### Clausen, P. J.

1977 A revision of the Nearctic, Neotropical, and Palearctic species of the genus Ochthera, including one Ethiopian species, and one new species from India. Trans. Amer. ent. Soc. 103: 451-530. (1 November)

### Cobres, J. P.

1781- Deliciae Cobresianae. Büchersammlung zur Naturgeschichte. [I 1782 Theil] [iii +] xxviii + 1-470 pp. (1781); II Theil, 471-956 [+ 1 errata] pp.(1782) J. F. de Göz, [Augsburg]. [A facsimile reprint was issued by A. Asher & Co., Amsterdam, 1966.]

### Collin, J. E.

1926 Supplementary notes on the genus Lucilia, Desv. (Diptera). Trans. ent. Soc. London 1926; 258-260, (21 December)

1948 On the classification of the genera allied to Musca L. (Diptera). Proc. R. ent. Soc. London (B) 17: 125-127. (15 October)

## Coquebert de Montbret, A. J.

1798 Sur une nouvelle espèce de Mouche. Bull. Sci. Soc. Philom., Paris 2: 145 ("an VII")

1804 Illustratio Iconographica Insectorum quae in Musaeis parisinis observavit et in lucem edidit Joh. Christ. Fabricius, praemissis ejusdem descriptionibus; accedunt species plurimae, vel minus aut nondum cognitae. Vol. 3, [4] + pp. 91-142. Petri Didot Natu Majoris, Parisiis [=Paris]. ["anno XII"]
[The whole work is in 3 parts ("decads"): 1799 [An VII], pp. 1-44, pl. 1-10; 1801 [An X], [iv] + pp. 47-90,

pl. 11-20; and 1804 [An XII], [iv] + pp. 91-142, pl. 21-30.]

# Coulson, J. R., C. W. Sabrosky & I. Muller

1965 Selected bibliography of North American Diptera. Pp. 1117-1547. In Stone, A., C. W. Sabrosky, W. W. Wirth, R. H. Foote & J. R. Coulson (eds.), A catalog of the Diptera of America north of Mexico. U.S. Dept. Agric., Agric. Handb. 276, iv + 1696 pp. (23 August)

#### Cowan, C. F.

- 1969 Notes on Griffith's Animal Kingdom of Cuvier (1824-1835). J. Soc. Biblphy nat. Hist. 5: 137-140.
- 1970 Annotationes Rhopalocerologicae. 70 p. Clumbury Press, Berkhamsted.
- 1971 On Guerin's *Iconographie*: particularly the insects. *J. Soc. Bibliphy nat. Hist.* 6: 18-29.

### Crosskey, R. W.

- 1965 A systematic revision of the Ameniinae (Diptera: Calliphoridae). *Bull. Br. Mus. nat. Hist. (Ent.)* 16: 33-140. (23 August)
- 1971 The type-material of Australasian, Oriental and Ethiopian Tachinidae (Diptera) described by Macquart and Bigot. *Bull. Br. Mus. nat. Hist.* (*Ent.*) 25: 251-305, 1 pl. (2 March)
- 1973a A revisionary classification of the Rutiliini (Diptera: Tachinidae), with keys to the described species. *Bull. Br. Mus. nat. Hist. (Ent.)*, *suppl.* 19, 167 pp. (22 February)
- 1973b A conspectus of the Tachinidae (Diptera) of Australia, including keys to the supraspecific taxa and taxonomic and host catalogues. *Bull. Br. Mus. nat. Hist. (Ent.), suppl.* 21, 221 pp. (7 December)
- 1974 The British Tachinidae of Walker and Stephens (Diptera). Bull. Br. Mus. nat. Hist. (Ent.) 30: 267-308. (12 June)
- 1977 A revision of the Rhinophoridae (Diptera) and a revision of the Afrotropical species. *Bull. Br. Mus. nat. Hist. (Ent.)* 36: 1-66. (29 September)

### Curtis, J.

- 1824- British Entomology: Being illustrations and descriptions of the genera
- 1839 of insects found in Great Britain and Ireland: containing coloured figures from nature of the most rare and beautiful species, and in many instances of the plants upon which they are found. Vol. 1, pls. 1-50 (1824); vol. 2, pls. 51-98 (1825); vol. 3, pls. 99-146 (1826); vol. 4, pls. 147-194 (1827); vol. 5, pls. 195-241 (1828); vol. 6, pls. 242-289 (1829); vol. 7, pls. 290-337 (1830); vol. 8, pls. 338-383 (1831); vol. 9, pls. 384-433 (1832); vol. 10, pls. 434-481 (1833); vol. 11, pls. 482-529 (1834); vol. 12, pls. 530-577 (1835); vol. 13, pls. 578-625 (1836); vol. 14, pls. 626-673 (1837); vol. 15, pls. 674-721 (1838); vol. 16, pls. 722-769 (1839). "Printed for the author" [by Richard and John E. Taylor], London.
- 1829- A guide to an arrangement of British insects; being a catalogue of all
- 1831 the named species hitherto discovered in Great Britain and Ireland. vi + 256 columns (128 pages) [+ 2 pp]. "Printed for the author" [by Richard and John E. Taylor], London.

[1 June 1829: columns 1-128; 1830: columns 129-160; 1831: columns 161-256.]

1837 A guide to an arrangement of British insects; being a catalogue of all the named species hitherto discovered in Great Britain and Ireland.

Second edition, greatly enlarged. vi + 282 columns (141 pages) + 283-294 full pp. "Printed for the author" [by Richard and John E. Taylor], London.

### Day, M. C. & M. G. Fitton

- 1977 Discovery in the Linnaean collection of type-material of insects described by Johann Reinhold Forster, with notes on the Hymenoptera. *Biol. J. Linnean Soc.* 9: 31-43.
- 1978 Re-curation of the Linnaean Hymenoptera (Insecta), with a reassessment of the taxonomic importance of the collection. *Biol. J. Linnean Soc.* 10: 181-198.

#### De Geer, C.

- 1773 *Mémoires pour servir à l'histoire des insectes.* Vol. 3, viii + 696 pp. P. Hesselberg, Stockholm.
- 1776 *Mémoires pour servir à l'histoire des insectes*. Vol. 6, viii + 523 pp., 30 pls. P. Hesselberg, Stockholm.

[Earlier volumes are considered non-binominal, and the names are available either from the German translation by Goeze (1782) or from the synopsis by Retzius (1783).]

### de Meijere, J. C. H.

1904 Neue und bekannte Süd-Asiatische Dipteren. *Bijdr. Dierkd.* 17/18: 83-118, pl. 8, fig. 22-23. (31 December+)

#### de Razoumowsky, G.

Histoire naturelle du Jorat et de ses environs; et celle des trois lacs de Neufchatel, Morat et Bienne; précédées d'un essai sur le climat, les productions, le commerce, les animaux de la partie du Pays de Vaud ou de la Suisse Romande, qui entre dan le plan de cet ouvrage.

Vol. 1, xvi + 322 pp., 3 pls.; vol. 2, 238 pp., 3 pls. Mourer, Lausanne. [Insects, vol. 1: 289-301 & 133-239 (catalog & new species)]

#### de Villers, C. J.

- 1789a Caroli Linnaei entomologia, faunae suecicae descriptionibus aucta; DD. Scopoli, Geoffroy, de Geer, Fabricii, Schrank, &c. speciebus vel in systemate non enumeratis, vel nuperrime detectis, vel speciebus Galliae Australis locupletata, generum specierumque rariorum iconibus ornata. Vol. 3, 657 pp., 4 pls. Piestre & Delamollière, Lugduni [=Lyon].
- 1789b Caroli Linnaei entomologia, faunae suecicae descriptionibus aucta; DD. Scopoli, Geoffroy, de Geer, Fabricii, Schrank, &c. speciebus vel in systemate non enumeratis, vel nuperrime detectis, vel speciebus Galliae Australis locupletata, generum specierumque rariorum iconibus ornata. Vol. 4, 556 + ccxiii pp., 1 pl. Piestre & Delamollière, Lugduni [=Lyon].

### Dear, J. P.

1977 A revision of Australian Rhiniinae (Diptera: Calliphoridae). *Aust. J. Zool.* 25: 779-826. (October)

1979 A revision of the Toxotarsinae (Diptera: Calliphoridae). *Pap. Avuls. Zool.* 32: 145-182. (20 February)

1985a Calliphoridae (Insecta: Diptera). Fauna of New Zealand 8, 86 pp. (24 February)

1985b A revision of the New World Chrysomyini (Diptera: Calliphoridae). *Revta bras. Zool.* 3: 109-169. (28 June)

Derksen, W. & U. Scheiding [Scheiding-Göllner]

1963- Index Litteraturae Entomologicae. Serie II: Die Welt-Literatur über

1975 die gesamte Entomologie von 1864 bis 1900. Band I A-E, xii + 697 pp. (1963); II F-L, 678 pp. (1965); III M-R, 528 pp. (1968); IV S-Z, 482 pp. (1972); V Register [by R. Gaedike], 238 pp. (1975). Deutsche Akademie der Landwirtschaftswissenschaften, Berlin.

Descourtilz, T.

1826 Description de quelques Insectes nouveaux découverts en France en 1825. *Mém. Soc. Linn. Paris* 5: 156-163, 1 pl.

Disney, R. H. L.

1982 Confirmation of a suspected synonym in the genus *Borophaga* (Diptera; Phoridae). *Ent. mon. Mag.* 119: 115. (9 August)

Doleschall, C. L.

1859 Derde bijdrage tot de kennis der dipteren fauna van Nederlandsch Indië. Natuurkd. Tijdschr. Ned.-Indië [1858] 17: 73-128. (14 April) [The 14 April 1859 date is recorded in the Society's Proceedings (Evenhuis, in list.)]

Donovan, E.

1792- The natural history of British Insects; explaining them in their several

1813 states, with the periods of their transformations, their food, oeconomy &c. Together with the history of such minute Insects as require investigation by the microscope. The whole illustrated by coloured figures, designed and executed from living specimens. Vol. 1, 80 + 20 pp, pls. 1-36 (1792); 2, 96 + 6, pls. 37-72 (1793); 3, 98 + 7 pp., pls. 73-108 (1794); 4, 96 + 6 pp., pls. 109 - 144 (1795); 5, 110 + 6 pp., pls. 145 - 180 (1796); 6, 86 + 6 pp., pls. 181 - 216 (1797); 7, 96 + 6 pp., pls. 217 - 252 (1798); 8, 88 + 6 pp., pls. 253 - 288 (1799); 9, 78 + 4 pp., pls. 289 - 324 (1800); 10, 95 + 14 pp., pls. 325 - 360 (1801); 11, ix + 100 + 7 pp., pls. 361 - 396 (1806); 12, 102 + 5 pp., pls. 397 - 432 (1807); 13, 74 + 4 pp., pls. 433 - 468 (1808); 14, 90 + 5 pp., pls. 469 - 504 (1810); 15, 83 + 5 pp., pls. 505 - 540 (1811); and 16, 91 + 10 pp., pls. 541 - 576 (1813). Rivington, London.

1805 An epitome of the natural history of the insects of New Holland, New Zealand, New Guinea, Otaheite, and other islands in the Indian, Southern, and Pacific oceans: including the figures and descriptions of one hundred and fifty-three species of the more splendid, beautiful, and interesting insects, hitherto discovered in those countries, and which for the most part have not appeared in the works of any preceding author. The figures are correctly delineated from speci-

mens of the insects; and with the descriptions are arranged according to the Linnaean system, with reference to the writings of Fabricius and other entomologists. Rivington, London. iv + [167] pp. + [41] pls. (after 20 July)

[This work is unpaginated and the plates and figures are unnumbered. It appears that copies of the printing proof were distributed as there are no paginated copies known. The figures are distinguished in each plate and associated legend by a series of diamond-shaped marks in place of figure numbers. The Diptera are described on the 166th and 167th pages and are figured on the 41st plate. The dedication page is dated 20 July and, noting that the work was apparently not finalized with pagination, it is assumed here that the issue date was soon after the 20 July date.]

### Drury, D.

1770- Illustrations of natural history. Wherein are exhibited upwards of two hundred and forty figures of exotic insects, according to their different genera; very few of which have hitherto been figured by any author, being engraved and coloured from nature, with the greatest accuracy, and under the author's own inspection, on fifty copper-plates. With a particular description of each insect: interspersed with remarks and reflections on the nature and properties of many of them. To which is added, a translation into French. Vol. 1, xxviii + 130 pp., 4 figs., 50 pls. (1770); vol. 2, vii + 90 pp., 50 pls., and index to Vols. 1-2 (4 unnumbered pages)(1773). "Printed for the author; sold by White," London.

[The scientific names are found only in the index.]

### Dryander, J.

1796- Catalogus bibliothecae historico-naturalis Josephi Banks regi a con1800 siliis intimis, Baroneti, Balnei equitis, Regiae Societatis praesidis,
caet. Tomus I, Scriptores Generales, vii + 309 [+14 index] pp. (1798);
II, Zoologi, xx + 578 [+ 30 index] pp. (1796); III, Botanici, xxiii + 656
[+38 index] pp. (9 November 1797); IV, Mineralogi, ix + 390 [+26
index] pp. (1799); V, Supplementum et Index Auctorum, 514 pp. (6
November 1800). Gul. Bulmer et Soc., Londini [=London]

# Dupuis, C.

1986 Dates de publication de l'"Histoire naturelle générale et particulière des crustacés et des insectes" (1802-1805) par Latreille dans le "Buffon de Sonnini". *Ann. Soc. Ent. Fr. (N.S.)* 22: 205-210. (30 June)

# Dušek, J. & P. Láska

1967 Versuch zum Aufbau eines natürlichen Systems mitteleuropäischer Arten der Unterfamilie Syrphinae (Diptera). Acta Sci. Nat. Brno 1: 349-390. (16 March)

# Emden, F. I. van

1939 Muscidae: A. — Muscinae and Stomoxydinae. *Ruwenzori Exped.* 1934-35 2: 49-89. British Museum (Natural History), London. (22 April)

1965 Diptera. Vol. 7. Muscidae, part 1. xiv + 647 pp., 2 pls. In Sewell, R.B.S. and M. L. Roonwal (eds.), The fauna of India and the adjacent countries. Government of India, Delhi. (June)

#### Erichson, W. F.

1851 Hymenoptera, Diptera and Neuroptera, pp. 60-69. In E. Ménétriés, Insecten, pp. 43-76, plate 3. In Middendorf, A. T. von. Reise in den äussersten Norden und Osten Sibiriens während der Jahre 1843 und 1844 mit allerhöchster Genehmigung auf Veranstaltung der Kaiserlichen Akademie der Wissenschaften zu St. Petersburg ausgeführt und in Verbindung mit vielen Gelehrten herausgegeben (von Dr. A. Th. v. Middendorf). Band II, Zoologie. Theil 1. Wirbellose Thiere: Annulaten. Echinodermen. Insecten. Krebse. Mollusken. Parasiten. Bearbeitet von F. Brandt, W. F. Erichson, Seb. Fischer, E. Grube, E. Ménétriés, A. Th. v. Middendorf. 516 pp., 32 plates. St. Petersburg.

Eschscholtz, J. F.

1822 Entomographien. Erste Lieferung. Reimer, Berlin. 128 + III pp., 2 pls. [This was a preprint issued in advance of the article that appeared in *Naturwiss*. Abhandl. Dorpat; see Eschscholtz, 1823. The preface is dated 24 May.]

1823 Entomographien. Naturwiss. Abhandl. Dorpat. 1: 57-186, 2 pls.

Estlund, O.

1796 Entomologiske Anmärkningar hörande till Fauna Suecica. K. Vetenskapsakad. Nyå Handl. 17: 126-132.

Evenhuis, N. L.

1988 Localities of Fabrician types collected by Labillardière on the voyage of the *Recherche* and *Espérance*, with special reference to the Diptera. *Arch. Nat. Hist.* 15: 185-196.

Evenhuis, N. L., F. C. Thompson, A. C. Pont & B. L. Pyle

1989 Literature cited. Pp. 809-991. In Evenhuis, N. L. (ed.), Catalog of the Diptera of the Australasian and Oceanian Regions. 1155 pp. Bishop Museum Press & E. J. Brill, Honolulu & Leiden. (23 August)

[Bishop Museum Special Publication 86.]

Eversmann, E.

1834 Diptera Wolgam fluvium inter et montes Uralenses observata. *Bull. Soc. imp. Nat. Moscou* 7: 420-432.

Fabricius, J. C.

1775 Systema entomologiae, sistens insectorvm classes, ordines, genera, species, adiectis synonymis, locis, descriptionibvs, observationibvs. [32] +832 pp. Kortii, Flensbvrgi et Lipsiae [=Flensburg and Leipzig]. (30 April)

[The Î.C.Z.N. (1958) determined the publication for this work as 17 April on the assumption that it first appeared at the Leipzig Easter book fair with the 17th being the Monday after Easter. However, the Leipzig

book fair was held two week after Easter (Sayre 1959: 4)!]

1777 Genera insectorvm eorvmqve characteres natvrales secvundvm nvmervm, figvram, sitvm et proportionem omnivm partivm oris adiecta mantissa speciervm nvper detectarvm. [16 +] 310 pp. M. F. Bartschii, Chilonii [=Kiel].

[Horn & Schlenkling (1928: 334) gave 1776 as the date without comment. Hagen (1862: 220) gave 1777 following Engelmann. The title page bears no date. The preface is dated 26 December 1776. Given that late date, we follow Hagen and date this work as appearing in 1777.]

1779 Reise nach Norwegen mit Bemerkungen aus der Naturhistorie und Oekonomie. lxiv + 388 pp. [+ 12] pp. Bohn, Hamburg.

1781 Species insectorum exhibentes eorum differentias specificas, synonyma, avctorym, loca natalia, metamorphosin adiectis observationibvs, descriptionibvs. Vol. 2, 517 pp. C. E. Bohnii, Hambyrgi et Kilonii [=Hamburg and Kiel]. (March)
[Shown at the Leipzig Easter book fair (29 April) (Cobres 1782: 820). Also listed in Allgemeines Verzeichniss

Neuer Bücher 6: 181 (Evenbuis in litt.).]

1787 Mantissa insectorum sistens species nuper detectas adiectis synonymis, observationibys, descriptionibys, emendationibys. Vol. 2, 382 pp. C. G. Proft, Hafniae [=Copenhagen]. (27 December) [The titles given for volumes 1 and 2 differ. The above is the title given for volume 2. The title given in Coulson et al. (1965: 1222) Is incomplete; that in Evenhuis et al. (1989: 863) is volume 1, not 2. The date is

from Minerva 10: 440 (Evenhuis in litt.).]

- 1794 Entomologia systematica emendata et aucta. Secundum classes, ordines, genera, species adjectis synonimis, locis, observationibus, descriptionibus. Vol. 4, [6] + 472 + [5] pp. C. G. Proft, Hafniae [=Copenhagen].
- Supplementum entomologiae systematicae. ii + 572 pp. Storch, Haf-1798 niae [= Copenhagen]. (20 May)
- 1805 Systema antliatorum secundum ordines, genera, species adiecta synonymis, locis, observationibus, descriptionibus. 373 pp., + 30 pp. Reichard, Brunsvigae [=Brunswick].

### Fabricius, O.

1780 Favna Groenlandica, systematice sistens animalia groenlandiae occidentalis hactenvs indagata, qvoad nomen specificym, triviale, vernacylymqve; synonyma avctorym plyriym, descriptionem, locym, victvm, generationem, mores, vsvm, captvramqve singvli, provt detegendi occasio fvit, maximaqve parte secvndvm proprias observationes. xvi + 452 pp., 1 plate. Ioannis Gottlob Rothe, Hafniae et Lipsiae [=Copenhagen & Leipzig]. (before 13 August)

[The date is from Dawson (1958: 333, The Banks letter ...) (Evenhuis in litt.).]

### Fallén, C. F.

1810 Specim. entomolog. novam Diptera disponendi methodum exhibens. 26 pp., 1 pl. Berlingianis, Lundae [=Lund]. (9 June)

1817 Beskrifning öfver de i Sverige funna fluge arter, som kunna föras till slägtet Musca. Första afdelningen. K. Svenska. Vetenskapsakad. Handl. (3) 1816: 226-254.

1820- Monographia Muscidum Sveciae. Pp. 1-12 (13 June 1820), 13-24 (13

1825 June 1820), 25-40 (14 June 1820); Pp. 41-48 (6 June 1821); pp. 49-56 (26 April 1823), 57-64 (31 May 1823); pp. 65-72 (9 December 1824); pp. 73-80 (23 April 1825), 81-94 (18 June 1825). Berlingianis, Lundae [=Lund]

#### Fan, Zi-de

[Correct form of first name is "Zi-de" according to Dr. Fan, but it also appears as "C.T.," "Tse-Teh," "Tze-Teh," or "Zide".]

1965 Key to species of common synanthropic flies in China. xv + 330 pp., 40 pls. Peking. [In Chinese.] (September)

1978 A new fly of the genus *Musca* from Tibet, China (Diptera: Muscidae). Acta ent. sin. 21: 329-331. [In Chinese with English summary.] (August)

Ferrar, P.

1987 A guide to the breeding habits and immature stages of Diptera Cyclorrhapha. Entomonograph 8, 907 pp. E. J. Brill/Scandinavian Science Press, Leiden & Copenhagen.

[Issued in two volumes: volume 1 (text), pp. 1-478, volume 2 (figures), pp. 479-907.]

Forskål, P.

1775 Descriptiones animalium avium, amphibiorum, piscium, insectorum, vermium; quae in itinere orientali observavit Petrus Forskål. Post mortem auctoris edidit Carsten Niebuhr. Adjuncta est materia medica kahirina atque tabula maris rubri geographica. 19 + 34 + 164 pp. Mölleri, Havniae [=Copenhagen]. (3 June)

Forsskåhl, J. P.— see Linnaeus 1764a

Forster, J. R.

1770 Catalogue of British Insects. 16 pp. Eyres, Warrington.

1771 Novae species insectorum. Centuria I. viii + 100 pp. Davies & White, London. (1 December)

1788 Enchiridion historiae naturali inserviens, quo termini et delineationes ad avium, piscium, insectorum et plantarum adumbrationes intelligendas et concinnandas, secundum methodum systematis Linnaeani continentur. [15 +] 224 pp. Hemmerde & Schwetschke, Halae [= Hallel. (27 March)

1794 Enchiridion historiae naturali inserviens, quo termini et delineationes ad avium, piscium, insectorum et plantarum adumbrationes intelligendas et concinnandas, secundum methodum systematis Linnaeani continentur. Editio altera emendatior [2nd edition]. 8 + 224 pp.

Stewart, Edinburgi [= Edinburgh].

Fourcroy, A. F. de

1785 Entomologia parisiensis; sive Catalogus Insectorum quae in Agro Parisiensi reperiuntur; Secundum methodum Geoffroeanam in sectiones, genera & species distributus: Cui addita sunt nomina trivialia & fere trecentae novae Species. viii + 544 pp. Aedibus Serpentineis, Parisiis [=Paris]. (before 1 August)

[As two volumes, pp. 1-231 & 233-544. The introduction written by Fourcroy makes it clear that all the species in this work should be properly attributed to Geoffroy who provided the names and descriptions (also

in Hagen (1862: 246)).]

Frisch, J. L.

1728 Beschreibung von allerley Insecten in Teutsch-Land, nebst nützlichen Anmerckungen und nöthigen Abbildungen von diesem kriechenden und fliegenden inländischen Gewürme, zur Bestätigung und Fortsetzung der gründlichen Entdeckung, so einige von der Natur dieser

Creaturen heraus gegeben, und zur Ergäntzung und Verbesserung der andern. Volume 7. [10+] 31 pp., 22 pls. Nicolai, Berlin.

1732 Beschreibung von allerley Insecten in Teutsch-Land, nebst nützlichen Anmerckungen und nöthigen Abbildungen von diesem kriechenden und fliegenden inländischen Gewürme, zur Bestätigung und Fortsetzung der gründlichen Entdeckung, so einige von der Natur dieser Creaturen heraus gegeben, und zur Ergäntzung und Verbesserung der andern. Volume 10. [7 + ] 25 [+ 5] pp., 21 pls. Nicolai, Berlin.

### Fuesslin, J. C.

1775 Verzeichniss der ihm bekannten Schweizerischen Inseckten mit einer ausgemahlten Kupfertafel: nebst der Ankündigung eines neuen Insecten Werks. xii + 62 pp., 1 pl. Fuesslin, Zürich & Steiner, Winterthur. (11 November)

[We have used the spelling "Fuesslin" as that is how the name appears on the title page and preface, Fuessly is used by Percheron (1837: 121) and Sherborn (1902: xxv), Gilbert (1977: 130) used Füssley and Horn & Schenkling (1928: 390) used Füessly but gave Füssly, Fuessly, Füessli and Fuesslin as alternative spellings. Hagen (1862: 257) used Füessly, but wrote "The author is always called Fuessly, only in Archiv he wrote Füessly and alternatively Fuessly!"

1778 Dr. Sulzers abgekürzter Geschichte der Insecten Etc. Nachricht davon, nebst Anmerkungen und Zusätzen. *Mag. Liebhaber. Ent.* 1: 141-242.

### Gaedike, R. & O. Smetana

- 1978 Ergänzungen und Berichtigungen zu Walter Horn und Sigmund Schenkling: Index Litteraturae Entomologicae, Serie I, die Welt-Literatur über die gesamte Entomologie bis inklusive 1863. Teil I: A—K. Beitr. Ent., Berlin 28: 329-436.
- 1984 Ergänzungen und Berichtigungen zu Walter Horn und Sigmund Schenkling: Index Litteraturae Entomologicae, Serie I, die Welt-Literatur über die gesamte Entomologie bis inklusive 1863. Teil I: L—Z. Beitr. Ent., Berlin 34: 167-291.

# Gagné, R. J.

1981 *Chrysomya* spp., old world blow flies (Diptera: Calliphoridae) recently established in the Americas. Bull. Ent. Soc. Amer. 27: 21-22.

# Geoffroy, E. L.

1762 Histoire abrégée des insectes qui se trouvent aux environs de Paris; dans laquelle ces animaux sont rangés suivant un ordre méthodique.

Volume 2. 690 pp., pls 11-22. Durand, Paris.

[First edition was published anonymously.]

1785 [new species in Fourcroy 1785 (q.v.)]

# Germar, E.F.

1825 Fauna Insectorum Europae. Fasc. 10, 25 pls. Kümmelii, Halae [=Halle].

[See Rautenberg (1957) for details on this series.]

1839 Die versteinerten Insecten Solenhofens. *Nova Acta Acad. Caes. Leop. Car.* 19: 187-222, pl. 21-23. (June)

### Gilbert, P.

1977 A compendium of the biographical literature on deceased entomologists. [viii +] 455 pp. British Museum (Natural History), London.

#### Gimmerthal, B. A.

1834 Observations de quelques nouvelles espèces de Diptères, accompagnées de recherches sur la métamorphose de quelques autres. *Bull. Soc. Imp. Moscou* 7: 98-121, pl. 1-2.

### Girschner, E.

- 1894 Beitrag zur Systematik der Musciden. Berl. ent. Ztschr. 38 [1893]: 297-312. (January)
- 1896 Ein neues Musciden-System auf Grund der Thoracalbeborstung und der Segmentierung des Hinterleibes. *Illustr. Wochenschr. Entomol.* 1: 12-16, 30-32, 61-64, 105-112.
- 1897 Über die Postalar-Membran (Schüppchen, Squamualae) der Dipteren. *Illustr. Wochenschr. Entomol.* 2: 534-539, 553-559, 567-571, 586-589, 603-607, 641-645, 666-670.

# Gistl, J. N. F. X.

- 1835 Neue Arten von Diptern aus der Umgegend von München, benannt und beschrieben von Meigen, aufgefunden von Dr. J. Waltl, Professor der Naturgeschichte in Passau. Faunus, Zeitschrift für Zoologie und vergleichende Anatomie [1], 2: 66-72. (May)
- 1837a Kritische Revisionen und Ergänzungen zu Schrank's "Enumeratio Insectorum Austriae, Fauna boica, u.s.w." Aus dem bisher noch ungedruckten literarischen Nachlass des sel. Schrank mitgetheilt von Gistl. Faunus, Zeitschrift für Zoologie und vergleichende Anatomie (2), 1 (1): 5-19. (May)
- 1837b Franz von Paula Schrank. Gallerie denkwürdiger Naturforscher. Faunus, Zeitschrift für Zoologie und vergleichende Anatomie (2), 1 (1), Beiblatt 1: 1-4; 1 (2), Beiblatt 2: 5-8.

  [This also includes, on page 8, the start of an unfinished bibliography of Schrank's works.]

1856 Die Mysterien der europäischen Insectenwelt. Ein geheimer Schlüssel für Sammler aller Insecten-Ordnungen und Stände behufs des Fangs, des Aufenhalts-Orts, der Wohnung, Täg- und Jahreszeit u.s.w. Zum ersten Male nach 25jährigen eigenen Erfahrungen zusammengestellt und herausgegeben. 12 + 532 pp. Dannheimer, Kempten. (18 February)

# Gmelin, J. F.

1790 Caroli a Linné, Systema naturae per regna tria naturae, secundum classes, ordines, genera, species; cum caracteribus, differentiis, synonymis, locis. Editio decima tertia, aucta, reformata [= Ed. 13.] Vol. 1: Regnum Animale, Pt. 5, Pp. 2225-3020. G. E. Beer, Lipsiae [=Leipzig]. (6 December)

#### Goedart, J.

- 1662a Metamorphosis et historia naturalis insectorum. [Volume 1.] [29+] 236 pp. Fierensium, Medioburgi [=Middleburg].
- 1662b *Metamorphosis et historia naturalis insectorum.* [Volume 2.] [30+] 259 pp. Fierensium, Medioburgi [=Middleburg].
- 1662c Metamorphosis et historia naturalis insectorum. [Volume 3.] [14+] 159 pp. Fierensium, Medioburgi [=Middleburg]. [See Lister for English translation.]

### Goeze, J. A. E.

1782 Des Herrn Baron Karl Degeer Königlichen Hofmarschalls & c. & c. Abhandlungen zur Geschichte der Insekten aus dem Französischen übersetzt und mit Anmerkungen herausgegeben. Volume 6. [6+] 200 pp., 30 pls. Raspe, Nürnberg. (31 August)

# Goffe, E. R.

- 1946 The Syrphidae (Diptera) of Moses Harris, 1776. Ent. mon. Mag. 82: 67-86 (30 March)
- 1951 The Syrphidae (Diptera) described by Moses Harris in 1776. *Ento-mologist* 84: 195-204.

### Graham, M. W. R. de V.

1979 "Ambulator": Francis Walker, English entomologist (1809-1874). Entomologist's Gaz. 30: 7-20, pls 2-3. (24 February)

### Gravenhorst, J. L. C.

1807 Vergleichende Uebersicht des Linneischen und einiger neuern zoologischen Systeme nebst dem eingeschalteten Verzeichnisse der zoologischen Sammlung des Verfassers und den Beschreibungen neuer Thierarten, die in derselben vorhanden sind. xvi + 476 pp. Dieterich, Goettingen. (19 March)

# Greenberg, B.

1971 Flies and Disease. [Volume 1:] Ecology, classification and biotic associations. xii + 856 pp. Princeton University Press, Princeton.

# Griffin, F. J.

1938 On the date of publication of Latreille (*in* Sonnini's Buffon), An X [sic], Hist. Nat. Gén. Partic. Crust. Ins. 3. *J. Soc. Bibliphy nat. Hist.* 1: 157. (25 May)

# Griffith, E. & E. Pidgeon

1832 The animal kingdom arranged in conformity with its organization, by the Baron Cuvier, member of the Institute of France, & c. & c. & c. with supplementary additions to each order. Volume 15. The class insecta arranged by the Baron Cuvier, with supplementary additions to each order, by Edward Griffith, F.L.S., A.S., & c. and Edward Pidgeon, Esq. and notices of new genera and species by George Gray, Esq. Volume 2. 796 pp., many plates. Whittaker, Treacher and Co., London. (December)

[Diptera are treated on pages 683-780 and on plates 62, 114, 122, 125 & 128. For dating information, see Cowan 1969.]

Grossinger, J. B.

1794 Universa historia physica regni hungariae secundum tria regna naturae digesta. Tomus IV. Regni animalis Pars IV. Entomologia, sive historia insectorum. xiv + 416 + xix pp., 1 pl. Weber, Posonii et Comaromii [=Posen & Komárno].

Guérin-Méneville, F. E.

1831 Insects, plates No. 1-No. 21. In Duperrey, L. I. (ed.), Voyage autour du monde, exécuté par ordre du Roi, sur la corvette de sa majesté, La Coquille, pendant les années 1822, 1823, 1824 et 1825, sous le Ministère et conformément aux instructions de S. E. M. Le Marquis de Clermont-Tonnerre, Ministre de la Marine; et publié sous les auspices de son excellence M<sup>gt</sup> Le C<sup>te</sup> de Charbrol, Ministre de la Marine et des Colonies. Histoire naturelle, Zoologie. Atlas. A Bertrand, Paris. '1826'.

[The Diptera are on plates 20 (25 July 1831) and 21 (5 September 1831).]

1838 Histoire naturelle des crustacés, arachnides et insectes, recueillis dans le voyage autour du monde de la corvette de sa Majesté, La Coquille, exécuté pendant les années 1822, 1823, 1824 et 1825, sous le commandement du Capitaine Duperrey. Première division. Crustacés, arachnides et insectes. xii + 319 pp. In Duperrey, L. I. (ed.), Voyage autour du monde, exécuté par ordre du Roi, sur la corvette de sa Majesté, La Coquille, pendant les années 1822, 1823, 1824 et 1825, sous le Ministère et conformément aux instructions de S. E. M. Le Marquis de Clermont-Tonnerre, Ministre de la Marine; et publié sous les auspices de son excellence M<sup>gr</sup> Le C<sup>te</sup> de Charbrol, Ministre de la Marine et des Colonies. Histoire naturelle, Zoologie. Vol. 2, Part 2. H. Bertrand, Paris. '1826'.

Guiglia, D.

1957 I tipi di Ditteri di Camillo Rondani e di altri autori appartenenti alle collezioni del Museo Civico di Storia Naturale di Genova. *Annali Mus. civ. Stor. nat. Giacomo Doria* 69: 193-207.

Guillou — see Le Guillou

Gurney, A. B.

1956 On the rendering of Charles De Geer's surname. *Bull. Brooklyn ent. Soc.* 51: 127-136.

Hagen, H.

- 1844 Nachricht über die entomologischen Sammlungen in Norwegen, Schweden und Dänemark. *Stettin. ent. Ztg* 5: 68-70, 75-80, 130-131. (February, March, April)
- 1861 On Moses Harris' work. Ent. weekly Intellig. 10: 181-183. (7 September)

- 1862 Bibliotheca Entomologica. Die Litteratur über das ganze Gebiet der Entomologie bis zum Jahre 1862. Erster Band, A—M. xii + 566 pp. W. Engelmann, Leipzig
- 1863 Bibliotheca Entomologica. Die Litteratur über das ganze Gebiet der Entomologie bis zum Jahre 1862. Zweiter Band, N—Zmit ein systematischen Sachregister. 512 pp. W. Engelmann, Leipzig

Haliday, A. H.

- 1833 Catalogue of the Diptera occurring about Holywood in Downshire. *Ent. Mag. (London)* 1: 147-180. (January)
- 1836 Notes, &c. upon Diptera. 2. Characters of some undescribed species of the Family Muscidae. *Ent. Mag. (London)* 4: 149-152. (October)
- 1851 Sendschreiben von Alexis H. Haliday an C. A. Dohrn über die Dipteren der in London befindlichen Linnéischen Sammlung. Stettin. ent. Ztg 12: 131-145.

Harpaz, I.

1973 Early entomology in the Middle East. Pp. 21-36. *In* Smith, R. F., T. E. Mittler & C. N. Smith [eds], *History of Entomology*. vii + 517 pp. Annual Reviews Inc., Palo Alto, California.

Harris, M.

- 1776- An exposition of English insects, with curious observations and re1780 marks, wherein each insect is particularly described; its parts and properties considered; the different sexes distinguished, and the natural history faithfully related. The whole illustrated with copper plates, drawn, engraved, and coloured, by the author. Decad I, pp. 1-40, 2 pls. + pls. 1-10 (1776a); Decad II, pp. 41-72, pls. 11-20 (?1776b); Decads III, IV, V, pp. 73-99, 100-138, 139-166, pls. 21-30, 31-40, 41-50 + 1 pl. (?1780). Robson Co., London "1776".
- 1782 An exposition of English insects including the several classes of Neuroptera, Hymenoptera, & Diptera, or bees, flies, & libellulae. Exhibiting on 51 copper plates near 500 figures, accurately drawn, & highly finished in colours, from Nature. The whole minutely described, arranged, & named, according to the Linnean system, with remarks. The figures of a great number of moths, not in the Aurelian collection, formerly published by the same author, and a plate with an explanation of colours, are likewise given in the work. viii + 166 pp. + index (4 unnumbered pages), 50 + 2 pls. White & Robson, London.

Harris, T. W.

VIII. Insects [of Part IV. Catalogues of Animals and Plants]. Pp. 566-595. In Hitchcock, E., Report on the geology, mineralogy, botany, and zoology of Massachusetts. Made and published by order of the government of that state: In four parts: Part I. Economical Geology. Part II. Topographical Geology. Part III. Scientific Geology. Part IV. Catalogues of animals and plants. With a descriptive list of the specimens of rocks and minerals collected for the government. Illus-

trated by numerous wood cuts and an atlas of plates. xii + 700 pp. + Atlas, 17 pls. J. S. & C. Adams, Amherst, Massachusetts.

1835 VIII. Insects [of Part IV. Catalogues of Animals and Plants]. Pp. 553-602. In Hitchcock, E., Report on the geology, mineralogy, botany, and zoology of Massachusetts. Made and published by order of the government of that state: In four parts: Part I. Economical Geology. Part II. Topographical Geology. Part III. Scientific Geology. Part IV. Catalogues of animals and plants. With a descriptive list of the specimens of rocks and minerals collected for the government. Illustrated by numerous wood cuts and an atlas of plates. Ed. 2, [iv] + xii + 702 pp. + Atlas, 17 pls. J. S. & C. Adams, Amherst, Massachusetts.

1841 A report on the insects of Massachusetts, injurious to vegetation. 459

pp. Cambridge, Massachusetts.

1869 Descriptions of insects selected from the manuscripts of Dr. Harris. Pp. 325-336. *In* Scudder, S. H. (ed.), Entomological correspondence of Thaddeus William Harris, M.D. *Boston Soc. Nat. Hist. Occas. Pprs* 1: 1-375, 4 pls.

Hartig, T.

1838 Ueber die parasitischen Zweiflügler des Waldes. [Hartig's] Jahresber. Fortschr. Forstwiss. Naturk. 1(2): 275-306.

Hayek, C. M. F. von

1985 On the type of material of the species of Coleoptera described from the Drury Collection by D. Drury and J. C. Fabricius with notes on some Coleoptera from the Milne collection preserved in the British Museum (Natural History). *Arch. Nat. Hist.* 12: 143-152.

Hennig, W.

1955- Muscidae [Fam.] 63b. In Lindner, E. (ed.), Die Fliegen der palaeark-

1964 tischen Region 7(2), 1110 pp., 33 pls. Schweizerbart, Stuttgart.

[The dates and lieferung numbers are: 182, pp. 1-48, pls. 1-3 (9 September 1955); 185, pp. 49-96, pls. 4-6 (17 October 1955); 194, pp. 97-144 (24 October 1956); 197, pp. 145-192, pls. 7-9 (7 August 1957); 199, pp. 193-232 (24 January 1958); 204, pp. 233-286, pls. 10-12 (19 February 1959); 205, pp. 289-336, pls. 13-15 (3 June 1959); 207, pp. 337-384, pls. 16-18 (28 September 1959); 209, pp. 385-432, pls. 19-20 (30 March 1960); 213, pp. 433-480, pls. 21-22 (9 December 1960); 215, pp. 481-528, pls. 23-26 (14 March 1961a); 217, pp. 529-576, pls. 27-30 (12 May 1961c); 223, pp. 577-624, pl. 31 (1 February 1962); 225, pp. 625-672 (26 January 1962); 227, pp. 673-720, pls. 32-33 (6 June 1962); 229, pp. 721-768 (15 June 1962); 233, pp. 769-816 (25 January 1963); 234, pp. 817-864 (10 July 1963); 241, pp. 865-912 (19 November 1963); 242, pp. 913-960 (19 November 1963); 248, pp. 961-1008 (24 June 1964); 249, pp. 1009-1056 (24 June 1964); 253, pp. 1057-1100 (30 November 1964).]

1961b Bericht über die Untersuchung der Typen einiger der von Rondani beschriebenen Arten aus der Familie Muscidae. *Beitr. Ent.* 11: 225-229. (March)

1966- Anthomyiidae [Fam.] 63a. In Lindner, E. (ed.), Die Fliegen der 1976 palaearktischen Region 7(1), lxxvii + 974 pp., 114 pls. Schweizerbart,

Stuttgart.

[The dates and lieferung numbers are: 315, bxxvii pp. (4 March 1976); 262, pp. 1-48, pls. 1-3 (31 January 1966); 268, pp. 49-96 (16 December 1966); 271, pp. 97-144, pls. 7-9 (17 April 1967); 272, pp. 145-192, pls. 10-14 (12 October 1967); 276, pp. 193-240, pls. 15-19 (28 November 1968); 278, pp. 241-288, pls. 20-26 (30 July 1969); 280, pp. 289-328, pls. 27-33 (24 November 1969); 282, pp. 329-376, pls. 34-44 (30 December

1970); 283, pp. 377-424, pls. 45-55 (30 December 1970); 294, pp. 425-472, pls. 56-61 (22 December 1972); 295, pp. 473-512, pls. 62-69 (24 July 1973); 296, pp. 513-592, pls. 70-77 (24 July 1973); 297, pp. 593-680, pls. 78-85 (24 July 1973); 306, pp. 681-776 (30 September 1974); 307, pp. 777-872 (30 September 1974); 308, pp. 873-920, pls. 86-108 (30 September 1974); 314, pp. 921-974, pls. 109-114 (4 March 1976),]

#### Henriksen, K. L.

1922 Oversigt over Dansk entomologis historie. [Part.] *Ent. Meddr* 15: 49-96. (7 November)

1940 Frederiksdal og Otto Friedrich Müller. *Ent. Meddr* 22: 5-6. (October) **Herbst, J. F. W.** 

1787 Kurze Einleitung zur Kenntniss der Insekten, für Ungeübte und Anfänger. Vol. 3, 200 pp., pls. 54-87. Lange, Berlin & Stralsund.

[Also issued as vol. 8 of Borowski, G. H. (ed.), Gemeinnützige Naturgeschichte des Thierreichs. Lange,
Berlin & Stralsund. Hagen gives separate authorship to the plates as: Sotzmann, D. F., Natürliche Abbildungen der merkwürdigsten Insecten.]

#### Herting, B.

1972 Die Typenexemplare der von Meigen (1824-1838) beschriebenen Raupenfliegen (Dipt. Tachinidae). Stuttgart. Beitr. Naturk. 243, 15 pp.

1984 Catalogue of Palearctic Tachinidae (Diptera). Stuttgart. Beitr. Naturk. (A, Biol.) 369, 228 pp.

### Higgins, L. G.

1963 Entomologia Carniolica: J. A. Scopoli, 1763. *J. Soc. Bibliphy nat. Hist.* 4: 167-169.

#### Ho, Ch'i

1938 The significance of the female terminalia of house-flies as a grouping character. *Ann. trop. Med. Parasit.* 32: 287-312. (12 October)

# Horn, W. & I. Kahle

1935- Über entomologische Sammlungen, Entomologen & Entomo-

1937 Museologie (Ein Beitrag zur Geschichte der Entomologie). *Ent. Beihefte* 2: 1-160 + 12 pp., pls. 1-16 (14 December 1935), 3: 161-296, pls. 17-26 (4 October 1936), 4: 297-536, pls. 27-38, i-vi (1 August 1937)

[The title given above is that from the title page and of part III, the titles for parts 1-11 lacked the words "Entomologen & Entomo-Museologie."]

# Horn, W., I. Kahle, G. Friese & R. Gaedike

1990 Collectiones entomologicae. Ein Kompendium über den Verbleib entomologischer Sammlungen der Welt bis 1960. Teil I: A bis K; Teil II: L bis Z. 573 pp. Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik, Berlin.

# Horn, W. & S. Schenkling

1928- Index Litteraturae Entomologie. Serie I: Die Welt-Literatur über die

1929 gesamte Entomologie bis inklusive 1863. Band I Aalborg - Ferrière, pp. 1-352, pl. 1 (May 1928); II Ferrill - Leconte, pp. 353-704, pl. 2 (August 1928); III Leconte - Schaum, pp. 705-1056, pl. 3 (November 1928); IV Schaum - Zwinger und Nachtrag, xxi + pp. 1057-1426, pl. 4 (February 1929). W. Horn, Berlin-Dahlem.

Horning, W.

1988 Entomology. Chap. 6, pp. 126-130. In Stanbury, P & J. Holland (eds.), Mr Macleay's celebrated Cabinet. The history of the Macleays and their museum. The Macleay Museum, University of Sydney, Sydney. (October)

Hough, G. de N.

1898 The Muscidae collected by Dr. A. Donaldson Smith in Somaliland. *Proc. Acad. nat. Sci. Philadelphia* 1898: 165-187. (3 May)

Houttuyn, M.

1761- Natuurlyke historie of uitvoerige Beschryving der Dieren, Planten en

1773 Mineraalen, volgens het samenstel van Heer Linnaeus met naauwkeurige afbeeldingen. Deel 1, Dieren (18 stukken). Houttuyn, Amsterdam.

[Vol. 12, [8+] 624 pp., pls. 93-98 (1768)]

Huckett, H. C.

1968 A note on the identity of *Hylemya variata* (Fallén) and *H. variabilis* Stein (Diptera: Anthomyiidae). *Proc. ent. Soc. Wash.* 70: 346-247. (18 December)

Illiger, J. K. W.

1807 Vol. 2, viii + 511 pp., 11 pls. In [Hellwig, J. C. L., & J. K. W. Illiger], Favna Etrvsca sistens Insecta qvae in provinciis Florentina et Pisana praesertim collegit Petrvs Rossivs. Iterum edita et annotatis perpetvis avcta. 2 vols. Fleckeisen, Helmstadii [=Helmstadt]. (19 December)

**International Commission on Zoological Nomenclature** 

1914 Opinion 57. Names dating from Hasselquist's "Iter Palaestinum," 1757, and the translation, 1762, are untenable. Pp. 131-134. In their Opinions rendered by the International Commission on Zoological Nomenclature, Opinions 57 to 65. Smithson. Inst. Pub. 2256: 131-169.

[Also published in Hemming, F., Opinions and declarations rendered by the International Commission on Zoological Nomenclature, Vol. 1, Sect. B, pp. 131-134, 1958.]

1925 Opinion 82. Suspension of rules for *Musca* Linnaeus, 1758A, type *Musca domestica*. Pp. 1-7. *In* their Opinions rendered by the International Commission on Zoological Nomenclature, Opinions 82 - 90. *Smithson. Inst., Smithson. Misc. Collect.* 73(3), 40 pp. (16 December) [Also published in Hemming, F., Opinions and declarations rendered by the International Commission on Zoological Nomenclature, Vol. 1, Sect. B, pp. 295-301, 1958.]

1954 Opinion 228. Rejection for nomenclatorial purposes of Geoffroy, 1762, Histoire abrégée des Insectes qui se trouvent aux environs de Paris. *Opin. Decl. Int. Comm. Zool. Nom.* 4: 209-220. (21 April)

1957 Opinion 441. Validation under the plenary powers of the names for five genera in the order Diptera (class Insecta) published in 1762 by Geoffroy (E. L.) in the work entitled Histoire abrégée des Insectes qui se trouvent aux environs de Paris. (Opinion supplementary to Opinion 228.) *Opin. Decl. int. Comm. zool. Nom.* 15: 83-120. (29 January)

- 1958 Opinion 516. Determination under the Plenary Powers of the relative precedence to be assigned to certain works on the Order Lepidoptera (Class Insecta) published in 1775 by Pieter Cramer, Michael Denis & Ignaz Schiffenmüller, Johann Christian Fabricius, Johann Casper Fuessly, and S. A. von Rottemburg respectively. *Opin. Decl. int. Comm. zool. Nom.* 19: 1-44. (16 May)
- 1969 Opinion 884. Musca lateralis Linnaeus, 1758 (Insecta Diptera): suppressed under the plenary powers. Bull. zool. Nom. 26: 123-124. (24 October)
- 1987 Opinion 1444. *Musca trilineata* Linnaeus, 1767 (Currently *Oxycera trilineata*; Insecta, Diptera): Specific name conserved. *Bull. zool. Nom.* 44: 149. (25 June).
- 1988 Opinion 1507. *Musca marginalis* Wiedemann, 1830 (currently *Chrysomya marginalis*; Insecta, Diptera): specific name conserved. *Bull. zool. Nom.* 45: 236. (23 September)
- 1990 Opinion 1618. *Protocalliphora* Hough, 1899 (Insecta, Diptera) and its type species *Musca azurea* Fallén, 1817: Usage conserved by the designation of a replacement lectotype. *Bull. zool. Nom.* 47: 235-236. (28 September)
- 1992 Opinion 1670. *Calliphora vicina* Robineau-Desvoidy, 1830 (Insecta, Diptera): specific name conserved. *Bull. zool. Nom.* 49: 90. (26 March)

### Jackson, B. D.

1890 History of the Linnean collections, prepared for the centenary anniversary of the Linnean Society. *Proc. Linn. Soc. Lond.* 1887-1888: 18-34.

#### Joblot, L.

1754 Observations d'histoire naturelle, faites avec le microscope. Première partie. 38 pp., 14 pls. Briasson, Paris.

# Johnson, C. W.

1925 Diptera of the Harris collection. *Proc. Boston Soc. nat. Hist.* 38: 57-99. (November)

# Johnston, T.H. & M.J. Bancroft

- 1920a The life histories of *Musca australis* Macq., and *M. vetustissima* Walker. *Proc. R. Soc. Queensl.* 31 [1919]: 181-203. (10 January)
- 1920b Notes on the chalcid parasites of muscoid flies in Australia. *Proc. R. Soc. Queensl.* 32: 19-30. (28 April)
- 1920c Experiments with certain Diptera as possible transmitters of bovine onchocerciasis. *Proc. R. Soc. Queensl.* 32: 31-57. (30 April)
- 1920d The life history of *Habronema* in relation to *Musca domestica* and native flies in Queensland, *Proc. R. Soc. Queensl.* 32: 61-88. (1 June)
- 1920e Notes on the biology of some Queensland flies. *Mem. Queensl. Mus.* 7: 31-43. (30 June)

Jördens, J. H.

1801- Entomologie und Helminthologie des menschlichen Körpers, oder

1802 Beschreibung und Abbildung der Bewohner und Feinde desselben unter den Insekten und Würmern. Vol. 1, 28 + 319 pp., 15 pls. (1801); 2, 2 + 153 pp., 7 pls (1802). G. A. Grau, Hof.

Joseph, A. N. T. & P. Parui

1972 A new subgenus of *Musca* from India (Diptera: Muscidae). *Zool. Anz.* 189: 179-181.

Kabat, A. R. & R. E. Petit

1988 The two printings of J. F. Gmelin's Systema Naturae, 13th Edition (1788-1796). *Nautilus* 102: 164-166.

Karsholt, O. E. & E. Schmidt Nielsen

1986 The Lepidoptera described by C. P. Thunberg. *Ent. Scand.* 16: 433-463. (10 March)

Karsch, F. A.

1886- Dipteren von Pungo-Andongo, gesammelt von Herrn Major Alexan-

1887 der von Homeyer. *Ent. Nachr*. 12: 49-58 (February), 257-264 (September), 337-342 (November); 13: 4-10 (January 1887)

Kinel, J.

1958 [After three years work in the Zoological Museum of the University of Wroclaw]. *Przeglad Zoologiczny* 1(4) [1957]: 305-312. [In Polish, with detailed English summary (pp. 310-312).]

Kirby, W.

1837 The Insects. Pt. 4, 325 pp., 8 pls. In Richardson, J., Fauna Boreal-Americana, or the zoology of the northern parts of British America. 4 pts. Fletcher, Norwich.

Kleynhans, K. P. N.

1987 Musca nevilli sp. nov. (Diptera: Muscidae), a dung-breeding fly from South Africa. Onderstepoort J. vet. Res. 54: 115-118. (June)

Kowarz, F.

1873 Beitrag zur Dipteren-Fauna Ungarns. Verh. zool.-bot. Ges. Wien 23: 453-464.

Krastin, N. I.

1950 Decipherment of the life-cycle of the nematode *Thelazia gulosa* (Railliet et Henry, 1910), a parasite of the eyes of cattle. [In Russian.] *Dokl. Akad. Nauk SSSR (n.s.)* 70: 549-551.

Kuhn, T. S.

1970 The structure of scientific revolutions. 2nd edition, enlarged. xii + 210 pp. Chicago University Press, Chicago.

Kurahashi, H.

1989 109. Family Calliphoridae. Pp. 702-718. In Evenhuis, N. L. (ed.), Catalog of the Diptera of the Australasian and Oceanian Regions. 1155 pp. Bishop Museum Press & E. J. Brill, Honolulu & Leiden. (23 August)

[Bishop Museum Special Publication 86.]

### Lamarck, J. B. P. A. de Monet

1801 Système des animaux sans vertèbres ou tableau général des classes. des ordres et des genres de ces animaux; présentant leurs caractères essentiels et leur distribution, d'après la considération de leurs rapports naturels et de leur organisation, et suivant l'arrangement établi dans les galeries du Muséum d'Hist. Naturelle, parmi leurs dépouilles conservées; précédé du discours d'ouverture du cours de Zoologie, donné dans le Muséum National d'Histoire Naturelle l'an 8 de la République. viii + 432 pp. Déterville, Paris ("an IX"). (January)

1816 Histoire naturelle des animaux sans vertèbres, présentant les caractères généraux et particuliers de ces animaux, leur distribution, leurs classes, leurs familles, leurs genres, et la citation des principales espèces qui s'y rapportent; précédée d'une introduction offrant la détermination des caractères essentiels de l'animal, sa distinction du végétal et des autres corps naturels, enfin, l'exposition des principes fondamentaux de la zoologie. Tome troisième. 586 pp. Verdière, Paris. (August)

### Latreille, P. A.

1796 Précis des caractères génériques des insectes, disposés dans un ordre naturel. xiv + 201 [+7] pp., 1 folding chart. Prévôt, Paris, & Brive, Bourdeaux, "an 5 de la R." (after 22 September) [Also, a facsimile edition by A. Hermann, 1947 [Paris?].]

1802 Histoire naturelle, générale et particulière, des Crustacés et des Insectes. Tome troisième. Familles naturelles des genres. [Vol. 95], 468 pp. In Sonnini, C.S. (ed.), Histoire naturelle par Buffon, nouvelle édition accompagnée de notes. Dufart, Paris, "An X". (6 November)
[The year on the title page is incorrect. The volume was actually published in "an XI" of the Republic, which was 22 September 1802 until 21 September 1803 (Griffin 1938; also Dupuis 1986).]

1809 Genera crustaceorum et insectorum secundum ordinem naturalem in familias disposita, iconibus exemplisque plurimis explicata. Volume 4. 399 pp. Koenig, Parisiis et Argentorati [= Paris & Strasbourg]. (20 March)

1810 Considérations générales sur l'ordre naturel des animaux composant les classes des Crustacés, des Arachnides, et des Insectes; avec un tableau méthodique de leurs genres, disposés en familles. 444 pp. Schoell, Paris. (23 May)

1818 Mouche, Musca. Pp. 437-442. In Société de Naturalistes et d'Agriculteurs. Nouveau Dictionnaire d'Histoire Naturelle, appliquée aux arts, à l'agriculture, à l'économie rurale et domestique, à la médecine, etc. Nouvelle édition, presqu'entièrement refondue et considérablement augmentée; avec des figures tirées des trois règnes de la nature. Volume 21. 612 pp., plates M18, G26-29. Déterville, Paris. (5 September)

1825 Familles naturelles du règne animal, exposées succinctement et dans un ordre analytique, avec l'indication de leurs genres. 570 pp. Baillière, Paris. (16 May)

1829 Suite et fin des insectes. Tome 5. xxiv + 556 pp. In Cuvier, G. L. C. F. D., Le règne animal distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée. Nouvelle edition, revue et augmentée. Déterville & Crochard, Paris. (11 April)

#### Leeuwenhoek, A. van

1719 Epistolae physiologicae super compluribus naturae arcanis, ubi variorum animalium atque plantarum fabrica, conformatio, proprietates atque operationes, novis & hactenus inobservatis experimentis illustrantur & oculis exhibentur; item peculiares & hactenus incognitae rerum quarumdam qualitates explicantur; ut sequens pagina docet; hactenus numquam editae. Cum figuris aeneis, & indice locupletissimo. [20+] 446 [+26] pp., many plates, Beman, Delphis [=Delft].

Le Guillou, E. J. F.

1842 Description de sept Diptères nouveaux, recueillis pendant le voyage autour du monde de l'Astrolabe et la Zélée. Revue zool. Soc. Cuvier. 5: 314-316. (October)

Lepechin, I. I.

1774 Tagebuch der Reise durch verschiedene Provinzen des Russichen Reiches in den Jahren 1768 und 1769. Aus dem Russichen übersetzt von M. Christian Heinrich Hase. [viii] + 332 pp., 23 pls. Richter, Altenburg. (April)

1775 Tagebuch der Reise durch verschiedene Provinzen des Russichen Reiches im Jahr 1770. Aus dem Russichen übersetzt von M. Christian

Heinrich Hase. [ii] + 211 pp., 11 pls. Richter, Altenburg.

1783 Tagebuch der Reise durch verschiedene Provinzen des Russichen Reiches im Jahr 1771. Aus dem Russichen übersetzt von M. Christian Heinrich Hase. [ii] + 234 pp., 17 pls. Richter, Altenburg.

# Lichtenstein, A. A. H.

1796 Catalogus musei zoologici ditissimi Hamburgi, d III. Februar 1796. Auctionis lege distrahendi. Sectio Tertia. Continens Insecta. 223 pp. Hamburg. (3 February)

[For full title and particulars, see Burger & Thompson 1981: 356.]

### Lindroth, C. H.

1957 The Linnaean species of carabid beetles. Zool. J. Linn. Soc. 43: 325-341. (February)

1973 Systematics specializes between Fabricius and Darwin; 1800-1859. Pp. 119-154. In Smith, R. F., T. E. Mittler & C. N. Smith [eds], History of Entomology, vii + 517 pp. Annual Reviews Inc., Palo Alto, California.

#### Linnaeus, C.

- 1746 Fauna Svecica sistens Animalia Sveciae Regni: Qvadrupedia, Aves. Amphibia, Pisces, Insecta, Vermes, distributa per classes & ordines. genera & species. Cum differentiis specierum, synonymis auctorum, nominibus incolarum, locis habitationum, descriptionibus Insectorum. [xxviii] +411 pp., 2 pls. L. Salvii, Stockholmiae [=Stockholm]. (20 October)
- 1758a Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum caracteribus, differentiis, synonymis, locis, Ed. 10, Vol. 1. 824 pp. L. Salvii, Holmiae [=Stockholm]. (1 January)
- 1758b Pandora insectorum, quam sub Praesido D. D. Car. Linnaei, proposuit Ericus Ol. Rydbeck, Ostro-Gothus, Upsaliae 1758, Julii 15, [i] + 31 pp., 1 pl. (15 July)

[Also reprinted in his Amoenitates Academicae; seu Dissertationes variae Physicae, Medicae, Botanicae antehac seorsim editae, nunc collectae et auctae, cum tabulis aeneis. [Ed. 1] 4: 232-252. Laurentii Salvii, Holmiae [=Stockholm] 1760.]

- 1761 Fauna Svecica sistens Animalia Sveciae Regni: Mammalia, Aves, Amphibia, Pisces, Insecta, Vermes, Distributa per classes & ordines. genera & species, cum differentiis specierum, synonymis auctorum, nominibus incolarum, locis natalium, descriptionibus insectorum. Editio altera, auctior [49] + 578 pp., 2 pls. L. Salvii, Stockholmiae [=Stockholm]. (after 28 July, date of preface)
- 1762 Zweyter Theil, enthält Beschreibungen verschiedener wichtiger Naturalien. Pp. 267-606. In Hasselquist, F., Reise nach Palästina in den Jahren von 1749 bis 1752. viii + 606 pp. J. C. Koppe, Rostock. (July) [This is the German translation by T. H. Gadebusch of Hasselquist, F., Iter Palaestinum, eller resa til heliga landet, foerrättad ifran ar 1749 til 1752 med beskrifningar, rön anmerkningar äfwer maerkwaerdigste naturalier, ultgifven af C. Linnaeus. 619 pp. Holmiae [=Stockholm] 1757. Suppressed by I. C. Z. N. 1914:
- 1764a XLIII. Hospita insectorum flora, quam praeside D:n. Doct. Carolo Linnaeo, proposuit alumnus degeerianus Jonas Gustav Forsskåhl Uplandus. Upsaliae 1752. Novemb. 4. Vol. 3: 171-312 in his Amoenitates Academicae; seu Dissertationes variae Physicae, Medicae, Botanicae antehac seorsim editae, nunc collectae et auctae, cum tabulis aeneis. [Ed. 1, reprint]. Laurentii Salvii, Holmiae [=Stockholm]. [While the author of this dissertation was J. G. Forsskåhl the names are attributed to Linnaeus.]
- 1764b XLIV. D. D. Miracula insectorum, sub Praesido D:ni Doct. Caroli Linnaei, s:ae r:ae M:tis archiatri, proposuit Gabriel Emanuel Avelin, Dalekarlus, Upsaliae 1752. Novemb. 19. Vol. 3: 313-334 in his Amoenitates Academicae; seu Dissertationes variae Physicae, Medicae, Botanicae antehac seorsim editae, nunc collectae et auctae, cum tabulis aeneis. [Ed. 1, reprint]. Laurentii Salvii, Holmiae [=Stockholm].
- 1764c XLV. D. D. Noxa insectorum sub Praesidio D:n Doct. Caroli Linnaei, proposita a Michael A. Baeckner, Helsingo, Upsaliae, 1752, Decemb. 18. Vol. 3: 335-362 in his Amoenitates Academicae; seu Dissertatio-

nes variae Physicae, Medicae, Botanicae antehac seorsim editae, nunc collectae et auctae, cum tabulis aeneis. [Ed. 1, reprint]. Laurentii Salvii, Holmiae [=Stockholm].

1767 Systema naturae per regna tria naturae, secundum classes, ordines, genera, species, cum caracteribus, differentiis, synonymis, locis. Ed. 12 (revised.). Vol. 1, Pt. 2, pp. 533-1327. L. Salvii, Holmiae [=Stockholm]. (14 June)

1771 Pandora et flora Rybyensis quam praeside D. D. Car. v. Linné proposuit Daniel Henr. Söderberg Junecopia Smolandus. Upsaliae 1771. Junii 26.

[This dissertation was reprinted in his Amoenitates Academicae seu Dissertationes variae Physicae, Medicae Botanicae antehae seorsim editae nunc collectae et auctae cum tabulis aeneis, Ed. 2 [Schreber], 8: 75-106, Erlangae [=Erlangaen], 1785. While the author of this dissertation was D. H. Söderberg the names are attributed to Linnaeus.]

Lioy, P.

1864 I Ditteri distribuiti secondo un nuovo metodo di classificazione naturale. [Part.] *Atti R. Ist. veneto Sci.* (3) 9: 879-910. (20 April)

Lisney, A. A.

1960 A bibliography of British Lepidoptera 1608-1799. xviii + 315 pp. The Chiswick Press, London.

Lister, M.

1682 Johannes Godartius of Insects. Done into English, and methodized, with the addition of notes. 4 + 140 pp. John White, York.

Loew, H.

1856 Neue Beiträge zur Kenntniss der Dipteren. Vierter Beitrag. *Programm K. Realschule Meseritz* 1856: 1-57. (17 March)
[Also issued as a separate with same title and pagination under the imprint \*Mittler, Berlin, 1856\*.]

Lopes, H. de Souza

1975 On female holotypes of some American species described by Francis Walker and J. Macquart (Diptera, Sarcophagidae, Calliphoridae). *Revta bras. Biol.* 34: 535-549. (20 June)

Lundbeck, W.

1916 Diptera Danica. Genera and species of flies hitherto found in Denmark. Part V. Lonchopteridae, Syrphidae. 603 pp., G. E. C. Gad, Copenhagen. (1 July)

Macquart, J.

1834 Insectes Diptères du nord de la France. Athéricères: Créophiles, Oestrides, Myopaires, Conopsaires, Scénopiniens, Céphalopsides. *Mém. Soc. R. Sci. Agric. Arts, Lille* 1833: 137-368, 6 pls. (before 1 October)

[Also published separately as his \*Insectes Diptères du nord de la France, vol. 5, 232 pp., 6 pls., Lille, 1834.]

1835 Histoire naturelle des Insectes.--Diptères. Vol. 2. 703 pp., pls. 13-24. In [Roret, N. E., ed.], Nouvelles suites à Buffon, formant, avec les oeuvres de cet auteur, un cours complet d'Histoire Naturelle. Collection accompagnée de planches. Roret, Paris. (before 1 April)

1843 Diptères exotiques nouveaux ou peu connus. Vol. 2, 3rd part. Mém. Soc. R. Sci. Agric. Arts, Lille 1842: 162-460, 36 pls.

[Published separately with pagination, 5-304, 36 pls. Roret, Paris, 1843. There is the possibility that the journal version was actually published in 1844; Guérin-Méneville reviews it in the February 1844 issue of Rev. Zool. Soc. Cuvier.; Bibliogr. Fr. mentions it in the 22 June 1844 issue; Macquart presented it to the Société Entomologique de la France at the 3 April 1844 meeting.]

1846 Diptères exotiques nouveaux ou peu connus. Supplément. *Mém. Soc. R. Sci. Agric. Arts, Lille* 1844: 133-364, 20 pls. (before 22 July)

[The date on the wrapper of the journal is 1846, the date on the title page is 1845. The last 4 pages of this paper in the journal (containing the index) are numbered 363, 364, 363, 364. The next article in the journal begins on page 365. The pagination of the reprint is continuous, thus the reprint appears to contain 2 additional pages. Reprinted with pagination 5-238, 20 pls. Roret, Paris, with "1846" on both the wrapper and title page. Reprint recorded in the 7 November 1846 issue of Bibliogr. Fr. The Bibliogr. Fr. mentions the journal version in the 22 August 1846 issue; it was presented by Macquart at the 22 July 1846 meeting of the Société Entomologique de la France.]

1847a Diptères exotiques nouveaux ou peu connus. 2. supplément. Roret,

Paris. Pp. 5-104, 6 pls. (before 11 September)

[This is the reprint version issued in advance of the journal version, Macquart, 1847b. Another version of this reprint is bound with Macquart, 1848. Its wrapper has "2.° et 3.° supplements." and the dates "1847 et 1848."]

1847b Diptères exotiques nouveaux ou peu connus. 2. e supplément. *Mém. Soc. R. Sci. Agric. Arts, Lille* 1846: 21-120, 6 pls. (before 25 December)

[Mentioned in the 25 December 1847 issue of Bibliogr. Fr.]

1848 Diptères exotiques nouveaux ou peu connus. Suite du 2. me supplément. *Mém. Soc. R. Sci. Agric. Arts, Lille* 1847(2): 161-237, 7 pls. (before 22 November)

[Presented by Macquart at the 22 November meeting of the Société Entomologique de la France. Reprint version with separate pagination 1-77, 7 pls. Roret, Paris. See also annotation under Macquart, 1847a.]

1850a Diptères exotiques nouveaux ou peu connus. 4.<sup>e</sup> supplément [part]. *Mém. Soc. R. Sci. Agric. Arts, Lille* 1849: 309-479, pl. 1-14. (before 6 July)

Reprinted with pagination 5-161, 14 pls. Roret, Paris. This includes only p. 309-465 of the original journal article. The legends to the plates and the index (p. 466-79 of the journal version) are not found in all copies of the reprint. A reprinted version seen by us has the dates "1850 et 1851" on the wrapper and contains the plate legends and index on p. 337-64. See also annotation under Macquart, 1851.]

1850b Animaux invertébrés. Pp. 1-634 pp. In Catalogue du Musée d'Histoire naturelle de la Ville de Lille. Vol. 2. iv + 634 pp. L. Danel, Lille.

1851 Diptères exotiques nouveaux ou peu connus. Suite du 4.º supplément publié dans les mémoires de 1849. *Mém. Soc. R. Sci. Agric. Arts. Lille* 1850: 134-294, pl. 15-28. (before 5 April)

Reprinted by Roret, Paris (without title, continuing from the end of the 1850 reprint without a break in the text or arrangement) with separate pagination, 161-336, pls. 15-28. The plate legends and index to both the 1850 and 1851 reprinted versions is present on p. 337-64 in a copy seen by us.]

1855 Diptères exotiques nouveaux ou peu connus. 5. e supplément. Mém. Soc. Sci. Agric. Lille (2) 1: 25-156, 7 pls. (before 18 August)
[Recorded in the 18 August issue of Bibliogr. Fr. Reprinted with separate pagination, 5-136, 7 pls. Roret, Paris, 1855.]

Magpayo, F. R., S. Shinonaga & R. Kano

1987 Studies on the calypterate muscoid flies in Philippines. 1. Report on species belonging to the genus *Musca* Linnaeus (Diptera, Muscidae). *Jap. J. sanit. Zool.* 38: 257-269. (15 December)

### Malloch, J. R.

- 1924 Exotic Muscaridae (Diptera). XV. Ann. Mag. nat. Hist. (9) 15 [1925]: 131-142. (31 December; date received at BMNH)
- 1925 Exotic Muscaridae (Diptera). XVII. Ann. Mag. nat. Hist. (9) 16: 361-377. (1 October; date received at BMNH)
- 1928 Fauna sumatrensis (Beitrag No. 56). Family Muscidae (Dipt.) *Ento-mol. Mitt.* 17: 290-303 (5 July), 310-336 (20 September)
- 1929a Exotic Muscaridae (Diptera). XXIV. Ann. Mag. nat. Hist. (10) 3: 249-280 (March)
- 1929b Exotic Muscaridae (Diptera). XXVI. Ann. Mag. nat. Hist. (10) 4: 97-120. (July)
- 1929c Exotic Muscaridae (Diptera). XXVII. Ann. Mag. nat. Hist. (10) 4: 249-257. (September)
- 1932 Exotic Muscaridae (Diptera). XXXVII. Ann. Mag. nat. Hist. (10) 10: 297-330. (October)
- 1934 Diptera II. Cyclorrhapha: Muscidae, Calliphoridae and Tachinidae. *In* van Straelen, V. (ed.), Résultats scientifiques du voyage aux Indes Orientales Néerlandaises de LL. AA. RR. le Prince et la Princesse Léopold de Belgique. *Mém. Mus. r. Hist. nat. Belg.* (hors série) 4 (10): 1-24. (30 June)

#### Manuel, B. E.

- 1797 Mouche. [Part.] Pp. 741-827. In Olivier, G. A., Histoire Naturelle des Insectes, Volume 7, Han-Mou. 827 pp. In Société de Gens de Lettres, de Savans et d'Artistes, Encyclopédie Méthodique. Panckoucke, Paris. [The volume is attributed to Olivier, but the article on "Mouche" is signed on p. 827 by Manuel.]
- 1811 Mouche. [Concl.] Pp. 1-45. *In* Olivier, G. A., Histoire Naturelle des Insectes, Volume 8, Mou-Pao. 722 pp. *In* Société de Gens de Lettres, de Savans et d'Artistes, *Encyclopédie Méthodique*. Agasse, Paris.

[A footnote on p. 45, after "Mouche", states that Olivier was returning to the editorship of this volume after an absence of several years on Government service, during which time the work from the letter L onwards had been entrusted to several collaborators. Manuel's name is signed at the end of the first part of the article on "Mouche" (see above). The rest of this article is likewise attributed to Manuel as the footnote appears after the article. Also, see Poche 1933.]

# Mayer, J.

1779 Bemerkungen über natürliche Gegenstände der Gegend um Schüttenhofen in Böhmen, und eines Theils der benachbarten Gebirge. *Abh. Privat Ges. Bohmen.*, *Prag* 4: 132-184.

# Mayr, E.

1969 *Principles of Systematic Zoology*. xi + 428 pp. New York, St. Louis, San Francisco.

# Meigen, J. W.

1803 Versuch einer neuen GattungsEintheilung der europäischen zweiflügligen Insekten. *Illiger's Mag. Ins.* 2: 259-281.

- 1804 Klassifikazion und Beschreibung der europäischen zweiflügligen Insekten. (Diptera Linn.) Erster Band. xxviii + 152 pp., 8 pls. Reichard, Braunschweig. (5 November)
- 1818 Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Erster Theil. xxxvi + 333 pp., 11 pls. Forstmann, Aachen. (before October)
  [Listed as received in the October issue of Isis (Oken's).]
- 1826 Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Fünfter Theil. xii + 412 pp., pls. 42-54. Schultz, Hamm. (before November)
- 1830 Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Sechster Theil, xi + 401 pp., pls. 55-66. Schulz, Hamm.
- 1835 [new species in Gistl, J. N. F. X.(q.v.)]
- 1838 Systematische Beschreibung der bekannten europäischen zweiflügeligen Insekten. Siebenter Theil oder Supplementband, xii + 434 pp., pls. 67-74. Schulz, Hamm.
- 1975 [Nomina nuda in Morge.]

Meijere —see de Meijere

### Meuschen, F. C.

1787 Museum sive index rerum naturalium continens instructissimam copiam pretiosissimorum omnis generis ex tribus regnis naturae objectorum quam dum in vivis erat magna diligentia multaquae cura comparavit vir amplissimus Abrahamus Gevers olim consiliarius primusque urbis Rotterodamensis consul praefectus sylvarum Hollandiae & Westrisiae Societatis Indiae orientalis director academiae caesareae naturae curiosorum socius etc. etc. iv + 659 pp. P & L Hosteyn, Rotterodami [=Rotterdam]. [before 12 September]

[This is a sale catalog, the sale being held on 12 September. The work was also reviewed in Gött. Gel. Anz. on 22 September (Evenhuis in litt.).]

### Michelsen, V.

- 1977 On the identity of *Musca vagans* Panzer, 1798 (Diptera: Anthomyiidae and Muscidae). *Ent. Scand.* 8: 320. (15 December)
- 1979a Notes on the identity and type-material of the Anthomyiidae, Fanniidae, and Muscidae (Diptera) described by J. C. Fabricius. *Steenstrupia* 5: 181-196. (20 September)
- 1979b Identity of *Musca conformis* Fallén, 1825, with a new synonymy in the genus *Pegomya* Robineau-Desvoidy, 1830 (Diptera: Anthomyiidae). *Ent. Scand.* 10: 257-258. (15 December)
- 1983 The Anthomyiidae (Diptera) described by Fallén, with a review of European *Emmesomyia* Malloch. *Ent. Scand.* 14: 109-120. (15 April)
- 1985 A revision of the Anthomyiidae (Diptera) described by J. W. Zetterstedt. *Steenstrupia* 11: 37-65. (5 March)

# Mikkola, K.

1983 Diagnostic insect pins: some problems of the Linnean insect collection solved. *Antenna* 7: 16-17.

Morge, G.

- 1973 Entomology in the Western World in antiquity and in medieval times. Pp. 37-80. *In* Smith, R. F., T. E. Mittler & C. N. Smith [eds]. *History of Entomology*. vii + 517 pp. Annual Reviews Inc., Palo Alto, California.
- 1975 Dipteren-Farbtafeln nach den bisher nicht veröffentlichten Original-Handzeichnungen Meigens: "Johann Wilhelm Meigen: Abbildung der europaeischen zweiflügeligen Insecten, nach der Natur". Pars I. Vorwort des Herausgebers - Faksimiles von Original-Legenden und -Index: "Erklaerung der Fig." und "Alphabetisches Verzeichniss der Gattungen und Arten" - Farbtafeln I-LXXX. Beitr. Ent. 25: 383-500, pls 1-80.

1976a Dipteren-Farbtafeln nach den bisher nicht veröffentlichten Original-Handzeichnungen Meigens: "Johann Wilhelm Meigen: Abbildung der europaeischen zweiflügeligen Insecten, nach der Natur". Pars II: Farbtafeln LXXXI-CLX. *Beitr. Ent.* 26: 441, pls 81-160.

1976b Dipteren-Farbtafeln nach den bisher nicht veröffentlichten Original-Handzeichnungen Meigens: "Johann Wilhelm Meigen: Abbildung der europaeischen zweiflügeligen Insecten, nach der Natur". Pars III: Farbtafeln CLXI-CCCV. *Beitr. Ent.* 26: 543, pls 161-305.

Morris, F.O.

1865 A catalogue British Insects, in all the Orders. 125 pp. Longmans, Green, Reader & Dyer, London.

Moufet, T.

1634 Insectorym sive minimorum animalium theatrym: olim ab Edoardo Wottono. Conrado Gesnero. Thomaqve Pennio inchoatum: tandem Tho. Movfeti Londinâtis operâ sumptibusq; maximis concinnatum, auctum, perfectum: et ad vivum expressis iconibus supra quingentis illustratum. [18 +] 326 pp. Cotes, Londoni [=London].

Müller, O. F.

- Favna insectorvm Fridrichsdalina, sive methodica descriptio insectorvm agri Fridrichsdalensis, cvm characteribvs genericis et specificis, nominibvs trivialibus, locis natalibvs, iconibvs allegatis, novisqve pluribvs speciebvs additis. xxiv + 96 pp. Io. Frid. Gleditschii, Hafniae et Lipsiae [=Copenhagen and Leipzig]. (26 March)
- 1766 [New species in Allioni 1766 (q.v.)] [See Bezzi (1908a: 74) for details on authorship.]
- 1776 Zoologiae Danicae prodromus, seu Animalium Daniae et Norvegiae indigenarum characteres, nomina, et synonyma imprimis popularium.

  xxxii + 274 [+8] pp. Hallageriis, Havniae [=Copenhagen]. (20 May)
  [Anker (1950: 28) gave 20 May for publication date. The book was also listed for sale at the Leipzig Easter
  Book Fäir, which would mean a publication date before 21 April.]

#### Müller, P. L. S.

1775 Des Ritters Carl von Linné Königlich Schwedischen Leibarztes &c. &c. vollständiges Natursystem nach der zwölften lateinischen Ausgabe und nach Anleitung des holländischen Houttuynischen Werks mit einer ausführlichen Erklärung ausgefertiget. Vol. 5, pt. 2, pp. 761-1066 + register (114 unnumbered pages), pls. 23-26. Gabriel Nicolaus Raspe, Nürnberg.

### Nash, R. & P. J. Chandler

1978 The Irish species of two-winged flies (Diptera) belonging to the families Fanniidae and Muscidae. *Proc. R. Ir. Acad.* (B) 78: 13-43.

#### Neboiss, A.

1963 The Trichoptera types of species described by J. Curtis. *Beitr. Ent.* 13: 582-635.

### Osten Sacken, C. R.

- 1881a A brief notice of Carl Ludwig Doleschall, the dipterologist. *Ent. mon. Mag.* 18: 114-116. (October)
- 1881b An essay of comparative chaetotaxy, or the arrangement of characteristic bristles of Diptera. *Mitt. münch. ent. Ver.* 5: 121-138.
- 1884 An essay of comparative chaetotaxy, or the arrangement of characteristic bristles of Diptera. *Trans. ent. Soc. London* 1884: 497-517. (3 December)
- 1887 On Mr. Portchinski's publications on the larvae of Muscidae, including a detailed abstract of his last paper: Comparative biology of the necrophagous and coprophagous larvae. *Berl. ent. Z.* 31: 17-28. (August)

# Ôuchi, Y.

- 1938a Diptera Sinica. Muscidae-Muscinae. I. On some muscid flies from eastern China. (Entomological Report No. 5). *J. Shanghai Sci. Inst.* (3) 4: 1-14, pl. 1. (February)
- 1938b Diptera Sinica. Muscidae-Muscinae. II. A new murcoid [sic] fly from southern China. (Entomological Report No. 10). *J. Shanghai Sci. Inst.* (3) 4: 31-32. (February)

# Pamplona, D.

- 1986 Revalidação de *Biopyrellia* Townsend, 1932 com redescrição de *B. bipuncta* (Wiedemann, 1830) (Diptera, Muscidae, Muscinae). *Revta bras. Biol.* 46: 49-54. (February)
- 1987 Revalidação de *Morellia nitida* Wiedemann, 1830 (Diptera, Muscidae, Muscinae). *Revta bras. Biol.* 47: 217-218. (30 May)

# Pandellé, L.

- 1894 Études sur les Muscides de France. II<sup>e</sup> partie. Revue Ent. 13: 1-113.
- 1898a Études sur les Muscides de France. III<sup>ê</sup>-partie. [Part.] *Revue Ent.* 17 (7-8) (Suppl.): 1-32. (?August)
- 1898b Études sur les Muscides de France. III<sup>e</sup>-partie. [Part.] *Revue Ent.* 17 (9-10) (Suppl.): 33-64. (?October)

Panzer, G. W. F.

1794a Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 17, 2 pp., 24 pls. Felsecker, Nürnberg. (January)

1794b Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 20, 2 pp., 24 pls. Felsecker, Nürnberg. (April)

1794c Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 24, 2 pp., 24 pls. Felsecker, Nürnberg. (after 21 August)

1798a Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 54, 2 pp., 24 pls. Felsecker, Nürnberg.

1798b Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 59, 2 pp., 24 pls. Felsecker, Nürnberg.

1798c Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 60, 2 pp., 24 pls. Felsecker, Nürnberg. (after 1 May)

1800 Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 73, 2 pp., 24 pls. Felsecker, Nürnberg.

1801 Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 82, 2 pp., 24 pls. Felsecker, Nürnberg.

1804 D. Jacobi Christiani Schaefferi Iconum Insectorum circa Ratisbonam indigenorum Enumeratio Systematica. xvi + 260 pp. Palmii, Erlangae [=Erlangen].

1805 Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 97, 2 pp., 24 pls. Felsecker, Nürnberg.

1806 Favnae insectorvm germanicae initia oder Deutschlands Insecten. H. 104, 2 pp., 24 pls. Felsecker, Nürnberg.

Pape, T.

1986 A revision of the Sarcophagidae (Diptera) described by J. C. Fabricius, C. F. Fallén, and J. W. Zetterstedt. *Ent. Scand.* 17: 301-312. (30 December)

1988 A revision of the Palaearctic Sarcophagidae (Diptera) described by C. Rondani. *Stuttgart. Beitr. Naturk.* (A) 416, 22 pp. (1 September)

Paterson, H. E.

1956 East-African Muscidae (Diptera). (Ergebnisse der Deutschen Zoologischen Ostafrika-Expedition 1951/1952, Gruppe Lindner, Stuttgart, Nr. 20). *Beitr. Ent.* 6: 154-179. (April)

1957 Three new species of *Musca* from southern Africa (Dipt., Muscidae). *J. entomol. Soc. sth. Africa* 20: 106-113. (31 May)

Patton, W. S.

1920 Some notes on the arthropods of medical and veterinary importance in Mesopotamia, and on their relation to disease. Part II. Mesopotamian house flies and their allies. *Indian J. Med. Res.* 7: 751-777, pls. 68-71. (April)

1922a Notes on the species of the genus *Musca* Linnaeus - Part I. *Bull. ent. Res.* 12: 411-426. (February)

- 1922b New Indian species of the genus *Musca*. *Indian J. Med. Res.* 10: 69-77. (July)
- 1923a Some Philippine species of the genus *Musca* Linnaeus. *Philipp. J. Sci.* 23: 309-322. (October)
- 1923b A new Oriental species of the genus *Musca*, with a note on the occurrence of *Musca dasyops* Stein in China and a revised list of the Oriental species of the genus *Musca* Linnaeus. *Philipp. J. Sci.* 23: 323-335. (October)
- 1925 Diptera of medical and veterinary importance, I. Types of older authors in continental museums. *Philipp. J. Sci.* 27: 177-200. (13 June)
- 1926 The Ethiopian species of the genus *Musca* Linnaeus. *Rec. Indian Mus.* 28: 29-52, pls 1-4. (31 March)
- 1932 Studies on the higher Diptera of medical and veterinary importance. A revision of the species of the genus *Musca* based on a comparative study of the male terminalia. I. The natural grouping of the species and their relationship to each other. *Ann. Trop. Med. Parasit.* 26: 347-405. (29 October)
- 1933a Studies on the higher Diptera of medical and veterinary importance. A revision of the genera of the tribe Muscini, subfamily Muscinae, based on a comparative study of the male terminalia. 1. The genus *Musca* Linnaeus. *Ann. trop. Med. Parasit.* 27: 135-156. (10 April)
- 1933b Studies on the higher Diptera of medical and veterinary importance. A revision of the species of the genus *Musca*, based on a comparative study of the male terminalia. II. A practical guide to the Palaearctic species. [Part.] *Ann. trop. Med. Parasit.* 27: 327-345. (7 July)
- 1933c Studies on the higher Diptera of medical and veterinary importance. A revision of the species of the genus *Musca*, based on a comparative study of the male terminalia. II. A practical guide to the Palaearctic species. [Concl.] *Ann. trop. Med. Parasit.* 27: 397-430. (21 October)
- 1933d A new haematophagous species of *Musca* from Malaya. *Ann. trop. Med. Parasit.* 27: 477-480. (21 October)
- 1934 The blood-sucking species of the genus *Musca* and the evolution of the blood-drawing proboscis in the genus. *Proc. Pacif. Sci. Congr.* 1933 5: 3361-3366.
- 1936 Studies on the higher Diptera of medical and veterinary importance. A revision of the species of the genus *Musca*, based on a comparative study of the male terminalia. III. A practical guide to the Ethiopian species. *Ann. Trop. Med. Parasit.* 30: 469-490. (23 December)
- 1937a Studies on the higher Diptera of medical and veterinary importance. A revision of the species of the genus *Musca*, based on a comparative study of the male terminalia. IV. A practical guide to the Oriental species. [Part.] *Ann trop. Med. Parasit.* 31: 127-140. (8 April)
- 1937b Studies on the higher Diptera of medical and veterinary importance. A revision of the species of the genus *Musca*, based on a comparative

study of the male terminalia. IV. A practical guide to the Oriental species. [Concl.] Ann. trop. Med. Parasit. 31: 195-213. (13 July)

Patton, W. S. & F. W. Cragg

1912 The genus *Pristirhychomyia* Brunetti, 1910. *Ann. trop. Med. Parasit.* 5: 509-514, pl. 25. (26 February)

1913a On certain haematophagous species of the genus *Musca*, with descriptions of two new species. *Indian J. Med. Res.* 1: 11-25, pls. 1-5. (July)

1913b A new species of *Philaematomyia*, with some remarks on the genus. *Indian J. Med. Res.* 1: 26-33, pls. 6-8. (July)

Patton, W. S. & E. MacGill.

1925 Comparative studies of the antennae of some of the higher Diptera. *Indian J. med. Res.* 13: 275-285, pls 7-13. (October)

Patton, W. S. & R. Senior-White.

1924 The Oriental species of the genus *Musca* Linnaeus. *Rec. Indian Mus.* 26: 553-577, pls. 29-33. (29 November)

Percheron, A.

1837 Bibliographie Entomologique, comprenant l'indication par ordre alphabéthique de noms d'Auteurs. 1° des ouvrages entomologiques publiés en France et a l'Étranger, depuis les temps les plus réculés jusques et y compris l'Année 1834; 2° des monographies et mémoires contenus dans les recueils, journaux et collections académiques Françaises et Étrangères; accompagnée de notices sur les ouvrages périodiques, les Dictionnaires et les Mémoires des Sociétés savantes; suivie d'une table méthodique et chronologique des matières. Vol. 1, xii + 326 pp.; vol. 2, 376 pp. J. B. Baillière, Paris & London.

Persson, P. I.

1964 Entomologiska museet och entomologer i Lund fram till 1800-talets slut. *Opusc. ent.* 29: 57-80. (31 March)

1972 "Eugenies resa." Localities, dates and labels of the insects collected during the voyage around the world by the Swedish frigate "Eugenie" in the years 1851-1853. *Ent. Tidskr.* 92 [1971]: 164-172.

Persson, P. I., A. C. Pont & V. Michelsen

1984 Notes on the insect collection of Charles De Geer, with a revision of his species of Fanniidae, Anthomyiidae and Muscidae (Diptera). *Ent. scand.* 15: 89-95. (7 May)

Petagna, V.

1792 Institutiones entomologicae. 12 + 718 + 10 pp., 10 pls. C. Raymundi, Neapoli [=Naples].

Peus, F.

1960 Zur Kenntnis der ornithoparasitischen Phormiinen (Diptera, Calliphoridae). Dt. Ent. Ztschr. (N.F.) 7: 193-235. (1 June)

#### Poche, F.

1933 Die Autorschaft einiger Abschnitte der Encyclopédie Méthodique, Histoire Naturelle, Insectes. *Wien. Ent. Zeitung* 53: 142-147. (30 November)

# Poda von Neuhaus, N.

1761 Insecta musei Graecensis, quae in ordines, genera et species juxta Systema Naturae Caroli Linnaei digessit. 127 + [xii] pp., 2 pls. Widmanstadii, Graecii [=Graz] (3 September)

[There are two versions of this work: one issued as a university program with a longer and more formal title and 8 extra pages of various university matters; and the other contains only Poda's dissertation. The university program was for 3 September, so the separate work was issued on or before that date. Also, a facsimile edition by W. Junk, Berlin, 1915.]

### Pont, A. C.

- 1966 Notes on the Muscidae of New Guinea (Diptera). I. The types of Francis Walker. *Ann. Mag. nat. Hist.* (13) 9: 87-99. (1 September)
- 1967 Notes on some Australasian Muscidae (Diptera) described by J. Macquart. *Annls Soc. ent. Fr.* (n.s.) 3: 181-190.
- 1968 The Diptera described by W. J. Rainbow from Funafuti Atoll, Ellice Islands. *Proc. R. ent. Soc. Lond.* (B) 37: 89-90. (4 October)
- 1970a The type-material of Oriental and Australasian Muscidae (Diptera) in the Zoological Museum, Amsterdam. *Beaufortia* 18: 77-111. (28 May)
- 1970b Myospila hennigi Gregor and Povolny, 1959 (Dipt., Muscidae), new to Britain, and notes on the European species of Myospila Rondani, 1856. Ent. mon. Mag. 106: 111-113. (22 December)
- 1972 97. Family Muscidae. 111 pp. In [Papavero, N. (ed.)] A Catalogue of the Diptera of the Americas South of the United States. Museu de Zoologia, Universidade de São Paulo. (12 January)
- 1973 Studies on Australian Muscidae (Diptera). IV. A revision of the subfamilies Muscinae and Stomoxyinae. *Australian J. Zool. Suppl.* 21: 129-296. (30 August)
- 1976 Hough's African Muscidae (Diptera). *J. ent. Soc. sth. Africa* 39: 267-270. (September)
- 1977a La faune terrestre de l'Île de Saint-Hélène, III. 29. Fam. Muscidae (including Anthomyiidae). *Annls Mus. r. Afr. cent.* Sér. 8vo (Sci. zool.) 215: 121-141. (July)
- 1977b Family Muscidae. Pp. 451-523. *In* Delfinado, M. D. & D. E. Hardy (eds.), *A Catalog of the Diptera of the Oriental region*. Vol. 3. Suborder Cyclorrhapha (excluding Division Aschiza). x + 854 pp. University of Hawaii Press, Honolulu. (19 December)
- 1980 85. Family Muscidae. Pp. 721-761. *In Crosskey*, R. W. (ed.), *Catalogue of the Diptera of the Afrotropical Region*. 1437 pp. British Museum (Natural History), London. (10 July)

- 1981 The Linnaean species of the families Fanniidae, Anthomyiidae and Muscidae (Insecta: Diptera). *Biol. J. Linnean Soc.* 15: 165-175. (23 February)
- 1984 A revision of the Fanniidae and Muscidae (Diptera) described by Fallén. *Ent. scand.* 15: 277-297. (27 September)
- 1986a Family Muscidae. Pp. 57-215. *In* Soós, A. & L. Papp (eds.), *Catalogue of Palaearctic Diptera*. Volume 11. Scathophagidae-Hypodermatidae. 346 pp. Akadémiai Kiadó, Budapest. (15 February)
- 1986b A revision of the Fanniidae and Muscidae described by J. W. Meigen (Insecta: Diptera). *Ann. Naturhist. Mus. Wien* 87(B): 197-253, 1 pl. (May)
- 1989 107. Family Muscidae. Pp. 675-699. In Evenhuis, N. L. (ed.), Catalog of the Diptera of the Australasian and Oceanian Regions. 1155 pp. Bishop Museum Press & E. J. Brill, Honolulu & Leiden. (23 August) [Bishop Museum Special Publication 86.]
- 1990 Muscidae. Pp. 163-170. *In* Townsend, B. C. (ed.), A Catalogue of the types of bloodsucking flies in the British Museum (Natural History). *Occ. Papers Syst. Ent.* 7, 371 pp. (25 January)
- In Family Muscidae. In Thompson, F. C. (ed), Systematic database of
- Press Nearctic Diptera. A catalog of names of flies, mosquitoes, gnats, midges and maggots, with information on their classification, distribution and documentation. *USDA Agric. Handbk*

# Pont, A. C. & L. Matile

1976 The identity of *Musca albomaculata* Macquart, 1843, and *Musca dorsomaculata* Macquart, 1843 (Diptera, Muscidae). *Ann. Natal Mus.* 22: 743-746. (30 November)

# Pont, A. C. & V. Michelsen

1982 The Muscoidea described by Moses Harris (Diptera: Fanniidae, Scathophagidae, Anthomyiidae, Muscidae). *Steenstrupia* 8: 25-46. (5 March)

Pontoppidan, E. L.

1765 Kurzgefasste Nachrichten, die Naturhistorie in Dännemark betreffend. Aus dem Dänischen übersetzt. 232 pp., 17 pls. Rothen, Profft & Bock, Kopenhagen & Hamburg. (before 19 December)

Portschinsky, J. A.

- 1885 Muscarum cadaverinarum stercorariarumque biologia comparata. [In Russian.] *Trudy russk. ént. Obshch.* 19: 210-244. (1 December)
- 1892 Biologie des mouches coprophagues et nécrophagues. Première partie. [In Russian.] *Trudy russk. ént. Obshch.* 26: 63-131. (14 February)
- 1910 Recherches biologiques sur le *Stomoxys calcitrans* L. et biologie comparée des mouches coprophagues. [In Russian.] *Trudy Byuro Ent*. 8(8), 63 + 2 + 90 pp., 1 pl.
- 1911 *Hydrotaea dentipes* F. sa biologie et la destruction par ses larves celles de *Musca domestica* L. [In Russian.] *Trudy Byuro Ent.* 9 (5): 30 pp.

#### Presl, J. S.

1822 Additamenta ad Faunam protogaeam, sistens descriptiones aliquot animalium in succino inclusorum. Pp. 191-207. *In* Presl, J. S. & Presl, C. B. (eds.), *Deliciae Pragenses historiam naturalem spectantes*. viii + 244 pp. Calvae, Pragae [=Prague]. (July)

[Date from Flora 5: 576 (Evenbuis in litt.).]

### Preyssler, J. D. E.

1791 Beschreibungen und Abbildungen derjenigen Insekten, welche in Sammlungen nicht aufzubewahren sind, dann aller, die noch ganz neu, und solcher, von denen wir noch keine oder doch sehr schlechte Abbildung besitzen. Mayer, Samm. Phys. Aufsätze, Dresden 1: 55-151, 3 pls

1793 [new species in Preyssler, Lindacker & Hofer 1793 (q.v.)]

# Preyssler, J. D. E., J. D. Lindacker & J. K. Hofer

1793 Beobachtungen über Gegenstände der Natur auf einer Reise durch den Böhmerwald im Sommer 1791. *Mayer, Samm. Phys. Aufsätze, Dresden* 3: 135-378, pl. 1.

### Rainbow, W. J.

The atoll of Funafuti, Ellice Group: its zoology, botany, ethnology, and general structure, based on collections made by Mr. Charles Hedley, of the Australian Museum, Sydney, N. S. W. IV. The insect fauna. *Mem. Aust. Mus.* 3: 89-102, pl 1. (25 February)

### Rathvon, S. S.

1855 [new species in Reigert 1855 (q.v.).]

# Ratzeburg, J. T. C.

1840 Die Forst-Insecten oder Abbildung und Beschreibung der in den Wäldern Preussens und der Nachbarstaaten als schädlich oder nützlich bekannt gewordenen Insecten; in systematischer Folge und mit besonderer Rücksicht auf die Vertilgung der Schädlichen. Vol. 2: Die Falter. viii + 252 pp., 4 tables, 17 pls. Nicolai, Berlin. (14 September)

1844 Die Forst-Insecten oder Abbildung und Beschreibung der in den Wäldern Preussens und der Nachbarstaaten als schädlich oder nützlich bekannt gewordenen Insecten; in systematischer Folge und mit besonderer Rücksicht auf die Vertilgung der Schädlichen. Vol. 3: Die Ader-, Zwei-, Halb-, Netz- und Geradflügler. viii + 314 pp., 5 tables, 16 pls. Nicolai, Berlin. (4 June)

1872 Forstwissenschaftliches Schriftsteller-Lexikon. xiii + 1-274 [part 1], [ii +] 275-516 pp. [part 2] Fr. Nicolai, Berlin.

# Rautenberg, L. E.

1957 Beiträge zur Kenntnis alter naturwissenschaftlicher Werke. Beitrag 12. *Beitr. Ent.* 7: 609-631. (November)

Ray, J.

1710 Historia insectorum. Opus posthumum jussu regiae societas Londinensis editum. xv + 400 pp. Churchill, Londini [= London].

Razoumowsky—see de Razoumowsky

Réaumur, R. A. F. de

1738 *Mémoires pour servir à l'histoire des insectes*. Tome quatrième. [ii] + xxxiv + 636 pp., 44 pls. L'Imprimerie Royale, Paris.

1740 Mémoires pour servir à l'histoire des insectes. Tome cinquième. xliv + 728 pp., 38 pls. L'Imprimerie Royale, Paris.

[Species redescribed following Limnaean system by Vallot (1802).]

Reigert, J. F.

1855 A treatise on the cause of cholera. An interesting discovery. 15 pp. E. J. Pinkerton, [Philadelphia?].

Redi, F.

1668 Esperienze intorno alla generazione degl'insetti. 228 pp., 29 pls. Stella, Firenze [= Florence].

1778 Opere di Francesco Redi gentilvomo aretino e accademico della crvsca seconda edizone Napoletana corrette e migliorata. Tomo 1. viii + 180 pp., 16 pls. Michele Stasi, Napoli [= Naples].

Retzius, A. I.

1783 Caroli Lib. Bar. De Geer regiae avlae maresch. r. ord. Wasiaci commend. crvcig. r. ord. de Stella Bor. eqvit. avrat. r. Acad. Scient. Svec. Membr. et Parisinae correspond. Genera et species insectorvm e generosissimi avctoris scriptis extraxit, digessit, latine qvoad partem reddidit, et terminologiam insectorvm linneanam addidit. vi+220 + 32 pp. Lebrecht, Lipsiae [= Leipzig]. (8 November)

Richet, R.

1987 L'identité de la "Mouche à damier", Sarcophaga carnaria (Linné, 1758) [Dipt. Sarcophagidae]. Bull. Soc. ent. France 91: 131-135 (1986), (March)

Robineau-Desvoidy, A. J. B.

1830 Essai sur les Myodaires. Mém. présentés Acad. R. Sci. Inst. France [Paris] (2)2: 1-813. (5 June)
[Recorded in the 5 June issue of Bibliogr. Fr.]

1863 Histoire naturelle des Diptères des environs de Paris. Oeuvre posthume du D<sup>r</sup> Robineau-Desvoidy publiée par les soins de sa famille, sous la direction de M. H. Monceaux. Vol. 2, 920 pp. V. Masson et fils, Paris. (early 1863)

Roemer, J. J.

1789 Genera Insectorum Linnaei et Fabricii iconibus illustrata. 86 [+ 3] pp., 37 pls. Henric. Steiner et Socias, Vitoduri [=Winterthur].

Rognes, K.

- 1986 The identity of *Sarcophaga alpina* Zetterstedt, 1838 and the interpretation of *Acrophaga* Brauer & Bergenstamm, 1891 (Diptera: Calliphoridae). *Ent. Scand.* 16: 351-354. (10 March)
- 1987a A new species in the *intermedia*-group and a new synonymy in the genus *Pollenia* Robineau-Desvoidy, 1830 (Diptera: Calliphoridae). *Syst. Ent.* 12: 381-388.
- 1987b The taxonomy of the *Pollenia rudis* species-group in the Holarctic region (Diptera: Calliphoridae). *Syst. Ent.* 12: 475-502.
- 1988 The taxonomy and phylogenetic relationships of the *Pollenia semicinerea* species-group (Diptera: Calliphoridae). *Syst. Ent.* 13: 315-345.
- 1991a Blowflies (Diptera, Calliphoridae) of Fennoscandia and Denmark. *Fauna Ent. Scand.* 24, 272 pp. (January)
- 1991b Revision of the cluster-flies of the *Pollenia viatica* species-group (Diptera: Calliphoridae). *Syst. Ent.* 16: 439-498.
- 1992 Revision of the cluster-flies of the *Pollenia vagabunda* species-group (Diptera: Calliphoridae). *Ent. scand.* 23: 95-114. (April)

### Rondani, C.

- 1848 Esame di varie specie d'insetti ditteri brasiliani. *In* Baudi & Truqui, *Studi Ent. (Turin)* 1: 63-112, pl. 3 bis.
- 1856 Dipterologiae Italicae Prodromus. Vol 1. Genera italica ordinis Dipterorum ordinatim disposita et distincta et in familias et stirpes aggregata. 226 [+ 2 pp.]. Stocchi, Parmae [=Parma].
- 1862 Dipterologiae Italicae prodromus. Vol. 5: Species Italicae ordinis dipterorum in genera characteribus definita, ordinatim collectae, methodo analitica distinctae, et novis vel minus cognitis descriptis. Pars quarta: Muscidae, Phasiinae-Dexinae-Muscinae-Stomoxidinae. 239 pp. Grazioli, Parmae [=Parma].
- 1868 Diptera Italica non vel minus cognita descripta vel annotata observationibus nonnullis additis. Fasc. III. *Atti Soc. Ital. Sci. Nat.* 11: 21-54.
- 1875 Muscaria exotica musei civici januensis observata et distincta. Fragmentum III. Species in insula Bonae Fortunae (Borneo), Provincia Sarawak, annis 1865-1868, lectae a March. J. Doria et Doct. O. Beccari. Ann. Mus. civ. Stor. Nat. Genoa 7; 421-464.

# Roser, C. L. F. von

1840 Erster Nachtrag zu dem im Jahre 1834 bekannt gemachten Verzeichnisse in Württemberg vorkommender zweiflügliger Insekten. *CorrespBl. k. württ. landw. Ver.* (n.F.) 1: 49-64.

# Rossi, P.

- 1788 Osservazioni insectologiche. *Memorie mat. fis. Soc. ital.* 4: 122-149, pl. 1.
- 1790 Fauna Etrusca. Sistens insecta quae in provinciis Florentina et Pisana praesertim collegit. Vol. 1, 272 pp.; vol. 2, 348 pp., 10 pls. Masi, Liburni [=Livorno].

1792- Mantissa insectorum, exhibens species nuper in Etruria collectas,

1794. adiectis Faunae Etruscae illustrationibus, ac emendationibus. 2 vols, 148 pp., 154 pp., 8 pls. Polloni, Pisis [=Pisa].

Royer, M.

1931 La collection de Diptères de Robineau-Desvoidy retrouvée et transportée au Muséum National d'Histoire Naturelle. *Bull. Ass. Nat. Vall. Loing* 14: 44-48, portrait. (17 September)

Rozkosny R., M. Chvála & A. C. Pont

1982 Diptera described by Johann Daniel Preyssler, 1790-1793. Scr. Fac. Sci. nat. Univ. purkyn. brun. 12: 349-356, 4 pls.

Rydbeck, E. O.—see Linnaeus 1758b

Sabrosky, C. W.

1956 The nomenclature of *Protocalliphora* (Diptera: Calliphoridae). *Proc. R. ent. Soc. London* (B) 25: 175-179. (October)

1958 An overlooked name in "Musca" (Diptera). Proc. Ent. Soc. Washington 60: 134-135. (18 April)

1961 Rondani's "Dipterologiae Italicae Prodromus." *Ann. Ent. Soc. Amer.* 54: 827-831. (15 November)

1974 In defence of Robineau-Desvoidy. *Mosquito Systematics* 6: 220-221. Saccà, G.

1947 Sull' esistenza di mosche domestiche resistenti al DDT. *Riv. Parassitol.* 8: 127-128.

Saccà, G. & L. Rivosecchi

1956a Una nuova sottospecie di 'Musca domestica' L. della regione etiopica. Atti Accad. naz. Lincei Rc. (8) 19(1955): 497-498.

1956b Ricerche sulla speciazione nelle mosche domestiche. III. — Diagnosi differenziale di *M. domestica curviforceps* subsp. nova. *Boll. Zool.* 32(1955): 215-224.

Sachtleben, H.

1944 Ueber einen Rest der Sammlung Bouché's und die in ihm enthaltenen Cocciden (Diptera, Hymenoptera und Hemiptera-Homoptera: Coccidae). *Arb. morph. taxon. ent. Berlin* 11: 65-76. (30 September)

1961. Nachträge zu "Walther Horn & Ilse Kahle: Über entomologische Sammlungen." *Beitr. Ent.* 11: 482-540. (September)

Salem, H. H. & A. F. El Sherif

1960 A new muscoid fly from Gebel Elba (Diptera: Muscidae). *Bull. Soc. Ent. Egypte* 44: 171-174. (1 July)

Samouelle, G.

1819 The Entomologist's useful compendium; or an introduction to the knowledge of British insects, comprising the best means of obtaining and preserving them, and a description of the apparatus generally used; together with the genera of Linné, and the modern method of arranging the classes Crustacea, Myriapoda, Spiders, Mites and Insects, from their affinities and structure, according to the views of

Dr. Leach. Also an explanation of the terms used in entomology; a calendar of the times of appearance and usual situations of near 3,000 species of British insects, with instructions for collecting and fitting up objects for the microscope. 496 pp., 12 pls. Boys, London. (June)

Santos Abreu, E.

1976 Monografia de los Anthomyidos de las Islas Canarias (Dipteros). 175 pp., 24 col. figs. Servicio del Aula de Cultura "Elias Santos Abreu", Excmo. Cabiodo Insular de la Palma, Canary Is.

Saunders, E.

1888 Index to Panzer's Fauna Insectorum Germaniae. 48 pp. Gurney & Jackson, London.

Sayre, G.

1959 Dates of publications describing Musci, 1801-1821. [vi] + 102 pp. Troy, New York. (April).

Schäffer [Schaeffer], J. C.

1753 Die Sattelfliege. [6 +] 20 pp., 1 color pl. Emanuel Adam Weiss, Regensburg. (1 September)
[Reviewed in Goll. Gel. Ang. 1753: 954 (Evenhuis in litt.).]

1764 V. Die Sattelfliege. Pp. 241-256, 1 pl. *In* his *Abhandlungen von Insecten*. Volume 2. 344 pp., 18 pls. Johann Leopold Montag, Regensburg.

1766a-Icones Insectorum circa Ratisbonam indigenorum coloribus naturam

1779 referentibus expressae. Natürlich ausgemahlte Abbildungen Regensburgischer Insecten. Vol. 1, pt. 1, vi + 50 pp., pls. 1-50 (1766a); vol. 1, pt. 2, vi + 50 + xii pp., pls. 51-100 (no date); vol. 2, pt. l, iv + 50 pp., pls. 101-150 (no date); vol. 2, pt. 2, vi + 50 + vi pp., pls. 151-200 (no date); vol. 3, iv + 80 + vi pp., pls. 201-280 [1779]. Breitfeld, Regensburg.

1766b Elementa Entomologica. CXXXV. tabvlae aere excvsae floridisqve coloribvs distinctae. Einleitung in die Insectenkenntnis. CXXXV. ausgemahlte Kupfertafeln. [7 + 8 + 17 pp.,] + 135 plates with facing legends. Weissianis, Ratisbonae [=Regensburg].

Scharfenberg, G. L.

1805 [new species in Bechstein & Scharfenberg (q. v.)]
[According to the introduction, new species are to be credited to Scharfenberg alone.]

Schellenberg, J. R.

1803 Genres des Mouches Diptères représentés en XLII. planches projettées et dessinées par Mr. J. R. Schellenberg, et expliquées par deux amateurs de l'Entomologie. Gattungen der Fliegen in XLII. Kupfertafeln entworfen und gezeichnet von J. R. Schellenberg, und erklärt durch zwey Liebhaber der Insektenkunde. 95 pp., 42 col. pls. Orell and Fuesli, Zürich.

[As clearly indicated in the title and introduction, Schellenberg only provided the plates, while the text and names were provided by two anonymous amateurs. However, as these anonymous authors are unknown, we follow tradition and attribute authorship of the whole work to Schellenberg.]

### Schiner, I. R.

1856 Scriptores austriaci rerum dipterologicarum. Eine Revision der von österreichischen Entomologen aufgeführten Dipteren. *Verhandl. K.-k. Zool.-Bot. Ver.*, *Wien* 6: 399-424.

1857 Diptera Austriaca. Aufzählung aller im Kaiserthume Oesterreich bisher aufgefundenen Zweiflügler. III. Die österreichischen Syr-

phiden. Verhandl. K.-k. Zool.-bot. Ges. Wien 7: 279-506.

1860- Fauna Austriaca. Die Fliegen (Diptera). Nach der analytischen

1862 Methode bearbeitet, mit der Characteristik sämmtlicher europäischer Gattungen, der Beschreibung aller in Deutschland vorkommenden Arten und der Aufzählung aller bisher beschriebenen europäischen Arten. Vol. 1, lxxx + 674 pp. H. 1, pp. 1-72; H. 2, pp. 73-184, pl. 1 (1860). H 3/4, pp. 185-368; H. 5, pp. 369-440 (1861). H 6/7, pp. 441-656; H. 8 (part), pp. 657-674 + i-lxxx, pl. 2 (1862). Gerold, Wien [=Vienna].

1868 Diptera. In [Wüllerstorf-Urbair, B. von], Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857, 1858, 1859, unter den Befehlen des Commodore B. von Wüllerstorf-Urbair. Zoologischer Theil 2, 1 (B), vi + 388 pp., 4 pls. Gerold, Wien [= Vienna]. (30

April)

Schnabl, J. & H. Dziedzicki

1911 Die Anthomyiden. Nova Acta Acad. Caesar. Leop. Carol. 95: 53-358. pl. 3-37.

Schrank, F. von P.

1776 Verzeichniss einiger Insekten, derer im Linneeanischen Natursysteme nicht gedacht wird. 7th Abh., pp. 59-98. *In* his *Beyträge zur Naturgeschichte*. 137 pp., 7 pls. Fritsch, Leipzig. (21 April)

1781 Envmeratio insectorvm Avstriae indigenorum. xxiv + 548 + [4] pp., 4 pls. Eberhardi Klett et Franck, Augustae Vindelicorum [=Augsburg]

(June

[Reviewed in Allg. Verz. Neuer Bücher 6: (Evenhuis in litt.).]

1796 Naturhistorische Beobachtungen um Pöttmes, Neuburg und Weihering. Pp. 97-226. *In* his *Sammlung naturhistorischer und physikalischer Aufsäze*. xvi + 456 pp., 7 pls. Raspe, Nürnberg.

1803 Favna Boica. Durchgedachte Geschichte der in Baiern einheimischen und zahmen Thiere. Vol. 3, Pt. 1. viii + 272 pp. Krüll, Landshut.

1837 [Names and nomina nuda in Gistl 1837a]

Schumann, H.

1974 Revision der palaearktischen *Bellardia*-Arten (Diptera, Calliphoridae). *Dt. ent. Ztschr.* (n.F.) 21: 231-299. (10 December)

Schummel, T. E.

1832 [Notes on order Diptera]. *In* Gravenhorst, J. C. Bericht der entomologischen Section in der Schlesischen Gesellschaft für vaterländische

Kultur, am Ende des Jahres 1831. Uebers. Arb. Schles. Ges. 1831: 72-77.

### Schwenckfeld, C.

1603 Theriotrophevm Silesiae, in qvo animalium, hoc est, qvadrupedum, reptilium, avium, piscium, insectorum natura, vis & usus sex libris perstringuntur. [23 +] 563 pp. Davidis Alberti, Lignicii [= Legnica].

Scopoli, J. A.

- 1763 Entomologia carniolica exhibens insecta carnioliae indigena et distributa in ordines, genera, species, varietates, methodo Linnaeana. 421 pp. Trattner, Vindobonae [=Vienna]. (before 23 June)
- 1772 Annus historico naturalis. Vol. 5. 128 pp. Hilscheri, Lipsiae [=Leipzig]. (21 November)
- 1777 Introductio ad historiam naturalem sistens genera lapidum, plantarum, et animalium hactenus detecta, caracteribus essentialibus donata, in tribus divisa, subinde ad leges Naturae. 506 pp. Gerle, Pragae [= Prague]. (13 April)

[Appeared at the Leipzig Easter Book Fair (cf. Schröter's J. 4: 482) (Evenhuis in litt.).]

- 1780 Zwölfter Brief. Ueber eine Gattung schädlicher Insekten, die man die kolombachischen Mücken nennet, welche unter den Ochsen, Schafen, Ziegen, Schweinen und Pferden in Serviert, dem Temeswarer Bannat, und der abendländischen Wallachen grossen Schaden anrichten. Pp. 123-135 in Griselini, F. (ed.), Versuch einer politischen und natürlichen Geschichte des temeswarer Banats in Briefen an Standespersonen und Gelehrte. Zweyter Theil. 135 pp., 9 pls. Johann Paul Krauss, Wien
- 1972 *Entomologia Carniola*. xxxiii + 7 pls. + 421 pp., 43 pls. Akademische Druck-u. Sanstalt, Graz.

[This reprint consists of an biography of Scopoli by Otto Guuglia followed by a photo facsimile of Scopoli (1763) and the unpublished plates.]

### Scudder, S. H.

- 1877 The first discovered traces of fossil insects in the American Tertiaries. *Bull. U. S. geol. geogr. Surv. Territ.* 3: 741-762.
- 1891 Index to the known fossil insects of the World including myriapods and arachnids. *Bull. U. S. Geol. Surv.* 71: 3-744.

Séguy, E.

- 1928 Mouches parasites. I. Conopides, Œstrides et Calliphorines de l'Europe occidentale. *Encycl. Ent.* (A)9: 3-251. (21 February)
- 1937 Diptera Fam. Muscidae. In Wytsman, P. (ed.), *Genera Insectorum*. 205: 604 pp., 9 pls. Desmet-Verteneuil, Bruxelles. (23 October) [Recorded in 23 October issue of *Naturae Novitates*.]

# Shaw, G.

1806 General zoology or systematic natural history. Volume 6, part 2, Insecta. Pp. i-x, 241-509, pls 80-137. Kearsley, London.

#### Sherborn, C. D.

- 1902 Index Animalium sive index nominum quae ab A. D. MDCCLVIII generibus et speciebus animalium imposita sunt. Sectio Prima. A Kalendis Ianuariis, MDCCLVIII usque ad finem Decembris, MDCCC. lix + 1195 pp. Cantabridgiae [=Cambridge, England]
- 1922 Sectio Secunda. A kalendis Ianuariis, MDCCCI usque ad finem Decembris, MDCCCL. cxxxi + 7056 pp. British Museum, London.
- 1932 Sectio Secunda. A kalendis Ianuariis, MDCCCI usque ad finem Decembris, MDCCCL. Epilogue, additions to Bibliography, additions and corrections, and index to trivialia. cxlviii + 1098 pp. British Museum, London.

### Shinonaga, S. & R. Kano

- 1971 Muscidae (Insecta: Diptera). Vol. I. 242 pp., 28 pls. In Fauna Japonica. Academic Press of Japan, Tokyo.
  [The publication date of "March" is certainly incorrect. Most probable date is late June.]
- 1977 A new species of the genus *Musca* L. from the Oriental Region, *Japan. J. Sanit. Zool.* 28: 111-113. (15 June)

#### Skidmore, P.

1985 The biology of the Muscidae of the world. *Series Ent.* 29. xiv + 550 pp. W. Junk, The Hague. (February)

#### Smith, A. Z.

1986 A history of the Hope Entomological Collections in the University Museum Oxford with lists of archives and collections. xiv + 172 pp., Clarendon Press, Oxford

# Smith, K. G. V., R. W. Crosskey & A. C. Pont

1980 Bibliography of cited literature. Pp. 889-1196. *In Crosskey, R. W.* (ed.), *Catalogue of the Diptera of the Afrotropical Region.* 1437 pp. British Museum (Natural History), London. (10 July)

# Smith, K. G. V. & E. Taylor

1964 On the location and recognition of some Walker types of Diptera from the W. W. Saunders collection. *Ent. mon. Mag.* 100: 21-33. (8 September)

# Snyder, F. M.

- 1951 Some old and new species of Muscinae from the Ethiopian region (Diptera, Muscidae). *Amer. Mus. Novit.* 1533, 42 pp. (1 October)
- 1965 Diptera: Muscidae. *Insects Micronesia* 13: 191-327, 2 tables. (22 March)

Söderberg, D. H.—see Linnaeus 1771

# Sommerfelt, S. C.

1824- Physisk-oeconomisk Beskrivelse over Saltdalen i Nordlandene. K. 1827 nor. Vidensk. Selsk. Skr. [2]2(1): 1-148.

### Speiser, P.

1924 Eine übersicht über die Dipterenfauna Deutsch-Ostafrikas. Pp. 90-156. In Braun, M., Beiträge aus der Tierkunde. Herrn Geh.

Regierungsrat Prof. Dr. med. et phil. M. Braun aus Anlass seines goldenen medizinischen Doktor-Jubiläums als Festgabe dargebracht von Schülern und Freunden. Gräfe und Unzer, Königsberg 156 p., 3 pls. (September)

Spilman, T. J.

1967 Gmelin's 13th Edition of the Systema Naturae: A case of neglect. *Ent. News* 78: 169-172.

### Stafleu, F. A. & R. S. Cowan

1976- Taxonomic Literature. A selective guide to botanical publications and 1988 collections with dates, commentaries and types. 2nd Edition. Vol. 1: A-G, xl + 1136 pp. (1976); II: H-Le, xviii + 991 pp. (1979); III: Lh-O, xii + 980 pp. (1981); IV: P-Sak, ix + 1214 pp. (1983); V: Sal-Ste, [vi +] 1066 pp. (1985); VI: Sti-Vuy, [vi +] 926 pp. (1986); VII: W-Z, lvi + 653 pp. (1988). Bohn, Scheltema & Holkema, Utrecht.

### Stein, J. R. Am

1857 Bündner Dipteren. Verzeichniss der Sammlung des Hrn. Major Am Stein in Malans. *Jber. naturf. Ges. Graubündens* (n. F.) 2: 89-111.

#### Stein, P.

- 1903 Die Bestimmung und Beschreibung der Muscinen und Anthomyinen mit Aushnahme der Gattung *Lispa* Latr. Pp. 99-122. *In* Becker, T., Aegyptische Dipteren. *Mitt. zool. Mus. Berlin* 2: 1-66 (12 August 1902); 67-195, pl. 4b-4e (23 September 1903)
- 1909 Neue javanische Anthomyiden. *Tijdschr. Ent.* 52: 205-271. (31 December)
- 1910 The Percy Sladen Trust expedition to the Indian Ocean in 1905, under the leadership of Mr. J. Stanley Gardiner. Vol. 3. No. IX. Diptera, Anthomyidae, mit den Gattungen *Rhinia* und *Idiella*. *Trans. Linn. Soc. London* (2, Zool.) 14: 149-163. (November)
- 1913 Neue afrikanische Anthomyiden. *Annls hist.-nat. Mus. natn. hung.* 11: 457-583. (24 December)
- 1916 Die Anthomyiden Europas. Tabellen zur Bestimmung der Gattungen und aller mir bekannten Arten, nebst mehr oder weniger ausführlichen Beschreibungen. *Arch. Naturgesch.* 81 A 10 [1915]: 1-224. (June)
- 1919 Die Anthomyidengattungen der Welt, analytisch bearbeitet, nebst einem kritisch-systematischen Verzeichnis aller aussereuropäischen Arten. *Arch. Naturgesch.* 83 A 1 [1917]: 85-178. (February)

# Stephens, J. F.

- 1829a The Nomenclature of British Insects; being a Compendious List of such Species as are contained in the Systematic Catalogue of British Insects, and forming a guide to their classification, & c. & c. 68 pp. Baldwin & Cradock, London. (1 June)
- 1829b A systematic catalogue of British insects: being an attempt to arrange all the hitherto discovered indigenous insects in accordance with their natural affinities. Containing also the references to every English

writer on entomology, and to the principal foreign authors. With all the published British genera to the present time. Part II. Insecta Haustellata. 388 pp. Baldwin & Cradock, London. (15 July)

Steyskal, G. C.

- 1968 48. Family Micropezidae. 33 pp. *In* [Papavero, N. (ed.)], *A Catalogue of the Diptera of the Americas south of the United States*. Museu de Zoologia, Universidade de São Paulo
- 1974a On the life and influence of J. W. Meigen by J. A. Förster, Stettin. Entomol. Ztg. 1846. 66-74; 130-140. [A translation.] *Mosquito Systematics* 6: 79-87.
- 1974b Notice nécrologique sur Meigen by J. Macquart, Ann. Soc. Ent. Fr. 16: 323-334, 1847. [A translation, in part.] *Mosquito Systematics* 6: 87-88.

Sulzer, J. H.

- 1761 Die Kennzeichen der Insekten, nach Anleitung des Königl. Schwed. Ritters und Leibarzts Karl Linnaeus, durch XXIV. Kupfertafeln erläutert und mit derselben natürlichen Geschichte begleitet. xxviii + 203 + 67 p., 24 pls. Heidegger, Zürich.
- 1776 Abgekiirzte Geschichte der Insecten nach dem Linaeischen System. Vol. 1, xxviii + 274 + 71 pp., 32 pls. Steiner, Winterthur. (21 April) [Shown at Leipzig Easter book fair (Cobres 1782: 380).]

Swammerdam, J. J.

1685 Historia Insectorum generalis, in qua quaecunque ad insecta eorumque mutationes spectant, dilucide ex sanioris philosophiae & experientae principiis explicantur, cum figuris & indicibus necessariis. [16+] 212 [+ 17] pp. Luchtmans, Lugd. Batavorum [= Leiden]

Swederus, N. S.

1787 Et nytt genus och femtio nya species af insecter. K. Vetenskapsakad. Nya Handl. (2) 8: 181-201, pl. 8, 276-290.

Thompson, F. C.

- 1973 De Geer's exotic *Musca* species (Diptera: Syrphidae and Calliphoridae). *Proc. ent. Soc. Washington* 75: 354-356. (5 October)
- 1980 The problem of old names as illustrated by *Brachyopa "conica* Panzer," with a synopsis of the Palaearctic species of *Brachyopa*. *Ent. Scand*. 11: 209-216. (7 July)
- 1981a The flower flies of the West Indies (Diptera: Syrphidae). *Mem. ent. Soc. Washington* 9, 200 pp. (2 September)
- 1981b Nomenclature of the European species of *Neoascia* Meigen (Diptera: Syrphidae). *Ent. Scand.* 12: 470-478. (15 September)
- 1988 Syrphidae (Diptera) described from unknown localities. *J. New York ent. Soc.* 96: 200-226. (28 April)
- 1990 Standard data elements for classification and nomenclature. 7 pp. In Thompson, F. C. (coordinator), R. A. Hellenthal, J. Louton, G. R. Noonan, R. T. Schuh & M. K. Thayer, Automatic Data Processing for

Systematic Entomology: Promises and Problems. A report for the Entomological Collection Network. 48 pp. Entomological Collections Network, Baton Rouge

Thompson, F. C., J. R. Vockeroth & M. C. D. Speight

1982 The Linnaean species of flower flies (Diptera: Syrphidae). *Mem. ent. Soc. Washington* 10: 150-165 (30 September)

Thomson, C. G.

1868 6. Diptera. Species novas descripsit. Pp. 443-614, pl. 9. *In* K. Svenska Vetenskaps-Akademien, *Kongliga svenska fregatten* Eugenies *resa omkring jorden under befäl af C. A. Virgin, åren 1851-1853*. Pt. 2: Zoologie, 1; Insekter, 617 pp., 9 pls. P. A. Norstedt & Söner, Stockholm. (December)

Thomson, R. C. M.

1937 Observations on the biology and larvae of the Anthomyidae. *Parasitology* 29: 273-358. (5 July)

1947 Notes on the breeding habits and early stages of some Muscids associated with cattle in Assam. *Proc. R. ent. Soc. Lond.* (A) 22: 89-100. (20 December)

Thunberg, C. P.

1789 D. D. Museum Naturalium Academiae Upsaliensis. Cujus Partem Septiman. [ii] + pp. 85-94. Upsaliae [=Uppsala]. (7 March)

1791 D. D. Museum Naturalium Academiae Upsaliensis. Appendix II. [i] + pp. 123-130. Upsaliae [=Uppsala]. (April)

Topsel, E.

their true and lively figure, their several names, conditions, kinds, virtues (both natural and medicinal), countries of their breed, their love and hatred to mankind, and the wonderful work of God in their creation, preservation and destruction. Interwoven with curious variety of historical narrations out of scriptures, fathers, philosophers, physicians, and poets: illustrated with divers hieroglyphicks and emblems, & c. both pleasant and profitable for students in all faculties and professions. Collected out of the writings of Conradus Gesner and other authors. Whereunto is now added, The Theater of Insects; or, lesser living creatures: as bees, flies, caterpillars, spiders, worms, & c. A most elaborate work: by T. Muffet, Dr. of Physick. The whole revised, corrected, and inlarged with the addition of two useful physical tables, by J. R. M. D. 1130 pp. Cotes, London.

[Muffet's 'Theater of insects' is a self-contained section of the book, pp. 889-1130, with its own title page

on which the author's name is rendered "Mouffet." "J. R." is presumably Dr. John Ray.]

Townsend, C. H. T.

1911 Review of work by Pantel and Portchinski on reproductive and early stage characters of muscoid flies. *Proc. ent. Soc. Wash.* 13: 151-170. (30 September)

1913 Inquiry into the relationships and taxonomy of the muscoid flies. *Can. Ent.* 45: 37-57. (10 February)

1915 Correction of the misuse of the generic name *Musca*, with description of two new genera. *J. Wash. Acad. Sci.* 5: 433-436. (19 June)

1921 Some new muscoid genera ancient and recent. *Insecutor Inscit.* menstr. 9: 132-134. (3 October)

1931a Notes on American Oestromuscoid types. Revta Ent. 1: 65-104 (25 April)

1931b Notes on American Oestromuscoid types. Revta Ent. 1: 157-183 (July)

1931c Notes on Old-World Oestromuscoid types. — Part I. Ann. Mag. nat. Hist. (10) 8: 369-391. (October)

1931d New genera and species of American Oestromuscoid flies. [conclusion]. *Revta Ent.* 1: 437-479. (14 November)

1932 Notes on Old-World Oestromuscoid types. — Part II. Ann. Mag. nat. Hist. (10) 9: 33-57. (January)

1937 Muscoid generic diagnoses and data. Glossinini to Agriini. Part V. 234 pp. *In* his *Manual of Myiology in twelve parts*. Townsend, Itaquaquecetuba, São Paulo.

Tumrasvin, W. & S. Shinonaga.

1977 Studies on medically important flies in Thailand. III. Report of species belonging to the genus *Musca* Linné, including the taxonomic key (Diptera: Muscidae). *Bull. Tokyo med. dent. Univ.* 24: 209-218. (September)

Turton, W.

1801 A general system of nature, through the three grand kingdoms, of animals, vegetables, and minerals: Systematically divided into their several classes, orders, genera, species, and varieties, with their habitations, manners, economy, structure and peculiarities. Translated from Gmelin's last edition of the celebrated Systema Naturae, by Sir Charles Linné: Amended and enlarged by the improvements and discoveries of later naturalists and Societies, with appropriate copper-plates. "1800" Vol. III, 784 pp. David Williams, Swansea.

Tuxen, S. L.

1967a The entomologist, J. C. Fabricius. *Ann. Rev. Ent.* 12: 1-14, portrait. 1967b Bibliographie von I. C. Fabricius. *Zool. Anzeiger* 178: 174-185.

1973 Entomology systematizes and describes: 1700-1815. Pp. 95-118. *In* Smith, R. F., T. E. Mittler & C. N. Smith [eds], *History of Entomology*. vii + 517 pp. Annual Reviews Inc., Palo Alto, California.

Vallot, J. N.

1802 Concordance systématique, servant de table des matières à l'ouvrage de Réaumur intitulé: Mémoires pour servir à l'Histoire des Insectes. 196 + 11 pp. Gregoire & Thouvenin, Paris ("An X") (before 22 September)

### Vane-Wright, R. I.

1975 The butterflies named by J. F. Gmelin (Lepidoptera: Rhopalocera). Bull. Br. Mus. nat. Hist. (Ent.) 32: 17-64, 6 pls. (11 April)

### Verrall, G. H.

1888 A list of British Diptera. 34 + 4 + 12 pp. Pratt, London.

1901a British flies. Vol. VIII. Platypezidae, Pipunculidae and Syrphidae of Great Britain. [ii] + 691 pp. Gurney & Jackson, London. (1 January)

1901b A list of British Diptera. 2nd edition. 47 pp. Cambridge University Press, Cambridge. (December)

### Villeneuve, J.

1916 A contribution to the study of the South African higher Myodarii (Diptera Calyptratae) based mostly on the material in the South African Museum. *Ann. S. Afr. Mus.* 15: 469-515. (8 December)

1922 Descriptions d'espèces nouvelles du genre "Musca." Annls Sci. Nat. (Zool, 10) 5: 335-336. (October)

1936 Description d'une nouvelle espèce africaine du genre *Musca*. *Bull*. *Annls Soc*. *Ent*. *Belg*. 76: 414. (31 December)

1937 Myodaires supérieurs africains. *Bull. Mus. R. Hist. Nat. Belg.* 13 (35), 4 pp. (August)

Villers, C. J. de-see de Villers, C. J.

### Vockeroth, J. R.

1953 Musca autumnalis Deg. in North America (Diptera: Muscidae). Can. Ent. 85: 422-423. (4 December)

1969 A revision of the genera of the Syrphini (Diptera: Syrphidae). Mem. Ent. Soc. Canada 62, 176 pp. (15 July)

1971 The identity of some Holarctic and Old World species of *Sphaero-phoria* (Diptera: Syrphidae). *Can. Ent.* 103: 1627-1634. (November) **Voss, W.** 

1881 Ioannes Antonius Scopoli, Lebensbild eines österreichischen Naturforschers und dessen Kenntnisse der Pilze Krains. *Verh. zool.-bot. Ges. Wien* 31: 17-66, portrait.

# Walckenaer, C. A.

1802 Faune Parisienne, Insectes. Ou histoire abrégée des Insectes des environs de Paris, classés d'après le Système de Fabricius, précédée d'un Discours sur les Insectes en général, pour servir d'introduction à l'étude de l'Entomologie. Vol. 2, xxii + 438 pp. Dentu, Paris. ["an XI"]. (after 22 September)

### Walker, F.

1836 Descriptions, & c. of the Diptera. Pp. 331-359. *In* Curtis, J., A. H. Haliday and F. Walker, Descriptions, & c. of the Insects collected by Captain P. P. King, R. N., F. R. S., in the Survey of the Straits of Magellan. *Trans. Linn. Soc. London* 17: 315-359. (9 July)

- 1849 List of the specimens of dipterous insects in the collection of the British Museum. Vol. 4, pp. 689-1172. British Museum, London. (8 December)
- 1851 Diptera. Vol. 1. 314 pp., pls. 1-10. In [Walker, F., H. T. Stainton, and S. J. Wilkinson], Insecta Britannica. Reeve and Benham, London. (2 February)
- 1853a Diptera. Vol. 2, vi + 298 pp., pls. 11-20. *In* [Walker, F., H. T. Stainton, and S. J. Wilkinson], *Insecta Britannica*. Lovell Reeve, London.
- 1853b Insecta saundersiana: or characters of undescribed insects in the collection of William Wilson Saunders, Esq., F.R.S., F.L.S., &c. Vol. 1. Diptera. [Part 4] Pp. 253-414, pls. 7-8. van Voorst, London. (before 7 March)
- 1856a Catalogue of the dipterous insects collected at Singapore and Malacca by Mr. A. R. Wallace, with descriptions of new species. *J. Proc. Linn. Soc. London (Zool.)* 1: 4-39, pls. 1-2. (1 March)
- 1856b Catalogue of the dipterous insects collected at Sarawak, Borneo, by Mr. A. R. Wallace, with descriptions of new species. *J. Proc. Linn. Soc. London (Zool.)* 1: 105-136, pl. 6. (1 November)
- 1858a Characters of undescribed Diptera in the collection of W. W. Saunders, Esq., F.R.S., &c. [part.] *Trans. Ent. Soc. London* (N.S.) 4: 190-235. (January)
- 1858b Catalogue of the dipterous insects collected in the Aru Islands by Mr. A. R. Wallace, with descriptions of new species. [part] *J. Proc. Linn. Soc. London (Zool.)* 3: 77-110. (1 November)
- 1859a Catalogue of the dipterous insects collected in the Aru Islands by Mr. A. R. Wallace, with descriptions of new species. [concl.] *J. Proc. Linn. Soc. London (Zool.)* 3: 111-131. (1 February)
- 1859b Catalogue of the dipterous insects collected at Makessar in Celebes, by Mr. A. R. Wallace, with descriptions of new species. [part] *J. Proc. Linn. Soc. London (Zool.)* 4: 97-144. (8 December)
- 1860 Catalogue of the dipterous insects collected in Amboyna by Mr. A. R. Wallace, with descriptions of new species. *J. Proc. Linn. Soc. London* (*Zool.*) 5: 144-168. (18 July)
- 1861a Characters of undescribed Diptera in the collection of W. W. Saunders, Esq., F.R.S., & c. [Part] *Trans. Ent. Soc. London* (2) 5: 297-334. (February)
- 1861b Catalogue of the dipterous insects collected at Dorey, New Guinea, by Mr. A. R. Wallace, with descriptions of new species. *J. Proc. Linn. Soc. London (Zool.)* 5: 229-254. (27 March)
- 1861c Catalogue of the dipterous insects collected at Manado in Celebes and in Tond, by Mr. A. R. Wallace, with descriptions of new species. [Part] *J. Proc. Linn. Soc. London (Zool.)* 5: 258-264. (27 March)
- 1861d Catalogue of the dipterous insects collected in Batchian, Kaisaa and Makian, and at Tidon in Celebes, by Mr. A. R. Wallace, with descrip-

tions of new species. J. Proc. Linn. Soc. London (Zool.) 5: 270-303. (24 May)

1864 Catalogue of the dipterous insects collected in Waigiou, Mysol, and North Ceram, by Mr. A. R. Wallace, with descriptions of new species. J. Proc. Linn. Soc. London (Zool.) 7: 202-238. (5 April)

Walker, K. L.

1985 Mystery of Francis Walker specimens solved. Antenna 9: 78-80. (April)

Weiss, H. B.

1926 Two entomologists of the eighteenth Century -- Eleazar Albin and Moses Harris. Science Mon., New York 23: 558-564.

1927 Dru Drury, silversmith and entomologist of the eighteenth century. Ent. News 38: 208-214 (1 July)

West, L. S.

1951 The housefly. Its natural history, medical importance and control. xi + 584 pp. Comstock, Ithaca, New York

West, L. S. & O. B. Peters

1973 An annotated bibliography of Musca domestica Linnaeus. xiii + 743 pp. Dawsons, Pall Mall, London.

Westring, J. P.

1814 Om ett slags Flug-larver i sår, och deras förvandling; anmärkte och beskrifne. K. svenska Vetenskapsakad, Handl. 181: 51-56, pl. 4b.

Westwood, J. O.

1840 Order XIII. Diptera Aristotle. (Antliata Fabricius. Halteriptera Clairv.). Pp. 125-154. in his An introduction to the modern classification of insects; founded on the natural habits and corresponding organisation of the different families. Synopsis of the genera of British insects. 158 pp. Longman, Orme, Brown, Green & Longmans, London. (6 June)

[Reviewed in Athenaenum 658: 458 (Evenhuis in litt.).]

White, A.

1843 [new species in White & Doubleday, 1843.]

White, A. & E. Doubleday

1843 List of the annulose animals hitherto recorded as found in New Zealand, with the descriptions of some new species. Pp. 265-295. In Gray, J. E., Fauna of New Zealand, Materials towards a fauna of New Zealand, Auckland Island, and Chatham Islands. Pp. 177-296. In Dieffenbach, E., Travels in New Zealand; with contributions to the geography, geology, botany, and natural history of that country. Vol. II, iv + 396 pp. John Murray, London. (21 January) [Reviewed in Athenaeum 795: 61 (Evenhuis in litt.)]

White, I. M.

1987 The Linnaean species of the family Tephritidae (Insecta: Diptera). Zool, J. Linn. Soc. 90: 99-107

#### Wiedemann, C. R. W.

1817 Neue Zweiflügler (Diptera Linn.) aus der Gegend um Kiel. Zool. Mag. (Wiedemann's) 1(1): 61-86. (July)

[Recorded in the July issue of Isis (Oken's).]

1818 Neue Insecten vom Vorgebirge der guten Hoffnung. Zool. Mag. (Wiedemann's) 1(2): 40-48.

1819a Beschreibung neuer Zweiflügler aus Ostindien und Afrika. Zool. Mag. (Wiedemann's) 1(3): 1-39.

1819b Brasilianische Zweiflügler. Zool. Mag. (Wiedemann's) 1(3): 40-56.

1824 Munus rectoris in Academia Christiana Albertina aditurus Analecta entomologica ex Museo Regio Havnicnsi maxime congesta profert iconibusque illustrat. 60 pp. E regio typographeo scholarum, Kiliae [=Kiel].

1825 [new species in Germar, E. F. (q.v.)]

1830 Aussereuropäische zweiflügelige Insekten. Vol. 2, xii + 684 + xi pp., 5 pls. Schulz, Hamm. (14 December)
[Recorded in the 14 December issue of Isis (Oken's).]

#### Wilkinson, R. S.

1980 The Thadeus[sic] W. Harris and Samuel H. Scudder Papers. *Ent. J. Var.* 92: 225-226. (September)

#### Wilson, J.

1835 A treatise on insects, general and systematic; being the article "Entomology," from the seventh edition of the Encyclopaedia Britannica. 327 pp., pls. 220-239. Black, Edinburgh. (November)

### Wotton, E.

1552 Edoardi Wottoni Oxoniensis de differentiis animalivm libri decem. [22 +] 220 double-spread [+ 26] pp. Lutetiae Parisiorum [= Paris] apud Vascosanum.

# Yarom, I.

1990 A review of the genus *Sapromyza* Fallén in Israel with remarks on *S.* (*Sapromyzosoma*) quadripunctata (Linnaeus)(Diptera: Lauxaniidae). *Ent. Scand.* 21: 289-304. (October)

# Yeats, T. P.

1773 Institutions of Entomology: being a translation of Linnaeus's ordines et genera insectorum; or, systematic arrangement of insects. Collated with the different systems of Geoffroy, Schaeffer and Scopoli; together with observations of the translator. viii + 272 pp. Horsfield, London.

# Zetterstedt, J. W.

1837 Conspectus familiarum, generum et specierum dipterorum, in Fauna Insectorum Lapponica descriptorum. *Isis, Jena* 21: 28-67. (January)

1838 Sectio Tertia: Diptera, pp. 477-868. *In* his *Insecta Lapponica*. vi + 1,140 (pp.). L. Voss, Lipsiae [=Leipzig]. (before September)

1842- Diptera Scandinaviae. Disposita et descripta. Vol. 1, pp. iii-xvi +

1860 1-440 (1842); vol. 2, pp. 441-894 (1843); vol. 3, pp. 895-1280 (1844);

vol. 4, pp. 1281-1738 (1845); vol. 5, pp. 1739-2162 (1846); vol. 6, pp. 2163-2580 (1847); vol. 7, pp. 2581-2934 (1848); vol. 8, pp. 2935-3366 (1849); vol. 9, pp. 3367-3710 (1850); vol. 10, pp. 3711-4090 (1851); vol. 11, pp. v-xii + 4091-4546 (1852); vol. 12: Sup. 3, pp. v-xx + 4547-4942 (1855); vol. 13: Sup. 4, pp. v-xvi + 4943-6190 (1859); vol 14, pp. 6191-6609 (1860). Lundbergiana, Lundae [=Lund].

### Zielke, E.

- 1970 Fundorte afrikanischer Muscinae (Diptera, Muscidae). Z. angew. Zool. 57: 499-510.
- 1971a Description of six new species of Muscidae (Diptera) from the Ethiopian region. *Proc. Biol. Soc. Washington* 84: 103-111. [30 June]
- 1971b Muscinae vom südlichen Afrika, Zool, Anz. 187: 214-218.
- 1971c Revision der Muscinae der äthiopischen Region. Series Ent. 7, viii + 199 pp. W. Junk, The Hague.
- 1971d Beitrag zur Kenntnis der Verbreitung afrikanischer Musciden (Muscidae; Diptera). *Ent. Mitt. zool. Mus. Hamburg* 4: 173-181. (15 August)
- 1973 Beitrag zur Kenntnis der Verbreitung afrikanischer Musciden (Muscidae; Diptera). Teil II: Canadian National Collection of Insects. *Z. angew. Zool.* 59: 361-375.
- 1974 Beitrag zur Kenntnis der Verbreitung afrikanischer Musciden (Muscidae: Diptera). Teil III: Sammlung der California Academy of Sciences. Z. angew. Zool. 61: 1-44.

### Zimin, L. S.

- 1948 Key to the larvae of synanthropic flies of Tadzhikistan (in the third stage). [In Russian] *Opred. Faune SSSR* 28, 114 pp., 61 figs.
- 1951 Insects-Diptera, 18, No. 4. Family Muscidae, true flies (Tribes Muscini and Stomoxydini). [In Russian] *Fauna SSSR* (n. s.) 45, 286 pp.

#### Zimsen, E.

- 1954 The insect types of C. R. W. Wiedemann in the Zoological Museum in Copenhagen. *Spolia zool. Mus. haun.* 14, 43 pp.
- 1964 The type material of I. C. Fabricius. 656 pp., 2 pl. Munksgaard, Copenhagen.

#### Zschach, J. J.

1788 Museum N. G. Leskeanum. Pars entomologica ad Systema Entomologiae Cl. Fabricii ordinata cura I. I. Zschachii, M. Bacc. [iv+] 136 pp., 3 col. pls. Müller, Lipsiae [=Leipzig]. (14 July)

[Reprinted in 1789 as pp. 1-136 in Karsten, G., Mysevm Leskeanym Regnym Animale. Qvod ordine systematico disposvit atque descripsit D. L. Gystavys Karsten. Vol. 1, [42 +] xiiv + 320 pp., frontispiece, 8 col. pls. Müller, Lipsiae [=Leipzig]. Reviewed in Gött. Gel. Anz. 1788: 1123 (Evenhuis in litt.).]

# **Postscript**

This project began with a real problem. I continually discovered situations where there were identical names which applied to different flies. These situations required that one name had to be changed, and in most cases, it was the name that workers were using that had to be changed. Naturally, my colleagues complained with the familiar refrain, "Why don't you make up your mind!" So, I wanted to examine sources of all names to gather the data necessary to resolve nomenclatural matters so names would no longer be changed for purely legalistic reasons (as opposed to changes resulting from an increase of our knowledge of species). Alternative courses of action were available: Rather than making the changes mandated by the rules, one could apply for an exception to the rules, or one could simply ignore the rules. However, both the alternatives are unethical, being contrary to the principle of priority and respect for history. The promise of Automatic Data Processing (ADP) made the task seem simple and guaranteed that the data could be shared by all. Thus, with the desire to resolve the problem of old names once and for all times, I started my odyssey through ancient history and modern ADP. Now that I am at the end of this odyssey, I offer a postscript.

Data standards (including editorial) are an often forgotten essential element. The lack of complete and comprehensive data standards haunted the project from the start and was the cause of much unproductive effort. ADP and desktop publishing are wonderful tools as enormous amounts of data can be quickly processed into eloquent publications, but they can just as easily turn the data into a mountain of garbage. What determines the difference is good standards and rigid adherence to them. While we followed the community standards, such as those of ICZN and BIOSIS, I discovered that many details are not covered by them. Hence, I evolved my own supplemental standards (Thompson et alia 1990). These are available to all. Beyond standards and ADP, xerox was essential. Much of the older literature is now almost inaccessible, locked away in rare book rooms. While we felt we got most things right the first time, we were always amazed by what we missed that first time. Xerox provided working copies that were readily available for re-examination. Sherborn's Index Animalium done without xerox and computers is in retrospect truly a Herculean accomplishment.

The *Musca* database was developed and is maintained on a Wang VS minicomputer using the Data Management System (DMS) supplied with the VS operating system. The text was done in Wang Word-Processing. VENTURA PUBLISHER was used to generate this book. COBOL programs were written to format the data for VENTURA. The word-processing documents

# Systematic Database of Musca Names

were converted to standard PC ASCII text files. Then these files were merged and printed with VENTURA. This database is now being converted from the Wang DMS environment to the PC environment.

From the *Musca* data file evolved the *Biosystematic Database of World Diptera*, which now contains virtually all the family-group (4,296) and genus-group (14,413) names that apply to flies and about 1/3 of the speciesgroup names (30,658). From these data various publications are planned, such as *Systematic Database of Nearctic Diptera*, and eventually all the data will be available on CD-ROM disks. A number of systematists are already working with me so my journey is no longer solitary and I hope more dipterists will join us. So the *Musca* database must be viewed as only the first part of an international cooperative effort to master the names of flies that we know. From there we will be able to name more easily the ones we do not know. And that is a large part of the first task in understanding the biodiversity that man's world and welfare depend upon. So, I conclude this work by dedicating it to all my colleagues who have helped and continue to help me master the names for flies.

F. CHRISTIAN THOMPSON

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